

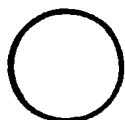
The Medical Writings of Rufus of Ephesus

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by

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Abstract

This thesis studies the works of a Greek doctor who lived in the first century A. D. Rufus of Ephesus. It is based on a reading of primary sources in both Greek, Latin and Arabic. The materials preserved in Arabic translation has not been fully studied before. This thesis attempts to draw a general picture of Rufus' life and practice of medicine. It looks for Rufus' learning centre, places of his practice of medicine and lists his writings and the various editions and translations they went through. The thesis discusses Rufus' status as a practitioner and, in particular, the criteria on which his choice of therapies were based. His explanations of the occurrences of diseases, whether expressed explicitly or implicitly are considered in detail. His views on humoral causation are investigated at length in this study in order to establish Rufus' originality or conventionality.

Bed-side medicine is another important aspect of Rufus' activities. In order to have an insight into Rufus' clinical thinking, this thesis studies carefully his treatise Medical Questions, in which Rufus advocates interrogating the patient in order to recognize his or her case more accurately and promote a better treatment. This treatise has an important value per se as it is the first ever Greek medical treatise which discusses exclusively the art of medical questioning. This thesis discusses Rufus' methods of therapy by concentrating on three different diseases, lithiasis, melancholy and jaundice. It concludes with paying attention to the issues of the Arabs' interest in the Greek civilization by investigating the reasons behind the translation of Rufus' works into Arabic, identifying the translators, and studying the Arabs' reception of Rufus' teaching.

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List of abbreviations

I have used the following manuscripts and editions throughout this study unless otherwise indicated.

Galen = Opera omnia, ed. C.G.Kühn, Hildesheim, 1964-.

Hippocrates = Oeuvres complètes d'Hippocrate, ed. E. Littré, Paris, 1839-1861.

Oribasius = Oeuvres d'Oribase, ed. U.C.Bussemaker and C.V.Daremborg, Paris, 1851-76.

Rufus. R.-D. = Oeuvres de Rufus d'Éphèse, ed. Ch.Ruelle and Ch.Daremborg, Paris, 1879.

Kj.= Krankenjournalen, ed. Manfred Ullmann, Wiesbaden, 1978.

Soranus = Sorani Gynaeciorum libri IV, ed. Johannes Ilberg, Leipzig, 1927.

al-Baladī = London, Royal College of Physicians, Ms. 8.

Ishaq ibn 'Imrān = Munich, Staatsbibliothek, Ms. arab. 805.

ar-Rāzī = al-Ḥāwī, Haydarabad, 1955 ff.

Ibn Sīnā = al-Qānūn fi-l-ṭibb, Baghdad, 1970.

Ibn abi Uṣaibi 'a = 'Uyūn al-anbā', Cairo, 1882.

Introduction

Our knowledge of ancient medicine is largely a knowledge of a limited number of Greek medical authors and practitioners : Hippocrates the father of medicine; Herophilus and Erasistratus, the representatives of Greek anatomy, Soranus of Ephesus, the gynaecologist, and Galen, the villain who eclipsed almost all the rest by his major contributions to ancient medicine and his subsequent domination over medieval medicine up till the eighteenth century. In fact Galen succeeded for centuries in shaping our knowledge of his past and present.¹ Studying Rufus of Ephesus, the Greek physician who lived in the second half of the first century A.D., can enrich our knowledge of ancient medicine, for he can provide us with direct information on the age that preceded that of Galen. He can back up Galen as well as rectify him. Focusing on a first-century medical man gives us a chance to know more about the first century medical schools, anatomy, medical theories and practice directly from original sources and not through Galen's eyes.

Rufus was a teacher, a Hippocratic exegete, anatomist, pharmacologist, practitioner, gynaecologist and paediatrician. He won Galen's respect and was popular in the Middle Ages among the Arabs while so little was known about him in the Medieval West. His works survive in Greek, Latin and Arabic.

¹ Cf. Owsei Temkin, Galenism: Rise and Decline of a Medical Philosophy, Ithaca, 1973; Wesley D. Smith, The Hippocratic Tradition, Ithaca, 1979; G.E.R.Lloyd, Methods and Problems in Greek Science, Cambridge, 1991.

Yet they have never been thoroughly studied. From 1879, when Ruelle and Daremberg edited for the first time Rufus' surviving Greek works, along with a Latin version of his work On Joint Diseases, and some of Rufus' Greek and Latin fragments, there was no scholarly interest in studying his works till 1930 when Ilberg wrote his monograph on Rufus' works. Ilberg's interest was mainly linguistic. He discussed the authenticity, the shape and the content of Rufus' complete works which are included in R.-D.'s edition, and some characteristics of Rufus' style. As for the Greek fragments, he focused on Rufus' fragments in Oribasius while paying Rufus' fragments in Aetius only very brief attention. He did not discuss at all Rufus' fragments in Paul's work. Because of his ignorance of the Arabic language, he had to rely on the Latin version of the Arabic fragments which are included in R.-D.'s editions in order to study some of its aspects. He also gives a German translation, done by Meyerhof, of Ibn abi Usaibi a's list of Rufus' works and makes some comments on it. The limitation of this work is obvious: Ilberg was mainly concerned with the philological aspects of Rufus' works. He did not provide a general picture of Rufus' medical views. Yet his merit lies in being the first to devote any large scale philological discussion to Rufus' writings and fragments. But after 1930 Rufus failed to attract any attention until the Arabists Ullmann and Sezgin in the 1970s included him in their catalogues of Arabic medicine. Rufus, as we have said, was popular in the Middle Ages among the Arabs, who quoted him extensively, along with other Greek authorities. Sezgin's

catalogue Geschichte des Arabischen Schrifttums, though occasionally going beyond Ullmann's Die Medizin im Islam, gives less information and a smaller number of citations than his predecessor. Their catalogues have opened the door for new sources of materials and pointed at the need to study them so as to form a general picture of Rufus' medical views. It also excited an interest in the process of transmission from Greek into Arabic. Ullmann, however, did not content himself with only providing a catalogue. Having at his disposal many manuscripts, he has edited two Arabic versions of two putative Greek works of Rufus. He has also drawn attention, in his book Islamic Medicine, to Rufus' importance in what concerns melancholy. In addition, he has written two articles on Rufus' paediatric and dietetic fragments. His intention was to authenticate both the Greek and Arabic fragments by comparing the two to each other and to translate them into German. Ullmann's efforts are very important. Yet his interest in specifics prevented him from giving an overall discussion of Rufus' medical opinions. Geoffrey Lloyd has recently drawn attention to Rufus' anatomical terminology, but only as a part of general interest in Greek anatomical terminology.² Giovanni B. Scarano, an Italian scholar, studied the paediatric citations in Rufus' works and fragments. He looked only at the Latin version of some of Rufus' Arabic fragments taken from ar-Rāzī's al-Hāwī which are included in R.-D.'s edition without paying attention to the relevant Arabic fragments in

² G.E.R.Lloyd, Science, Folklore and Ideology, Cambridge, 1983.

al-Baladī's Tadbīr al-Habālā. Therefore his knowledge of Rufus' paediatrics is far from complete.

When I started working on my thesis on the medical writings of Rufus of Ephesus in January 1988, there was no one else, to the best of my knowledge, who had done any general work on Rufus since Ilberg. However, in 1989 the German medical dissertation of Henrike Thomssen appeared from the Technical University of Munich.³ Henrike Thomssen discusses in her dissertation Rufus' anatomy, physiology and pathology, diagnosis and therapy. The last four points I also discuss in this thesis. But the limitations of Henrike Thomssen's dissertation are obvious. Unlike Ilberg, she does not reflect at all any philological interest in Rufus' works. In fact she accepted all her sources without discussing their authenticity. Moreover she concentrated only on Rufus' complete works, without mentioning his Greek or Arabic fragments except for three: fragments nos. 11, 66, and 85 in R-D.'s edition. Fragment no. 85 does not belong to Rufus but to Alexander of Tralles and it is included in R.-D.'s edition in order to provide some clarification for Rufus' texts. Her ignorance of both Greek and Arabic fragments has driven her into simplistic interpretations and wrong conclusions. Secondly, her thesis' preoccupation with proving Methodist and Pneumatist influence on Rufus has led to a very one-sided presentation, which takes little account of the objections to her ideas.

³ I owe the knowledge of this dissertation to Dr. Michael Hagner.

It is clear from this survey that the number of general studies on Rufus' works and ideas is very limited. This thesis, a study of the medical writings of Rufus of Ephesus, aspires to add more to our knowledge of Rufus the physician and his age.

For this study I have used three different sources of materials : Greek, Latin and Arabic. Ruelle-Darembert's edition as well as the subsequent editions of Rufus' Greek works provide us with the Greek part, and with the Latin version of Rufus' treatise On Joint Diseases. Ullmann's editions of the two Arabic versions of Rufus' two tracts On Jaundice and the so-called Krankenjournal provide one of the major Arabic sources. For the Arabic fragments I have consulted a number of Arabic manuscripts and also some edited Arabic works where Rufus has been quoted. I have also gone beyond what Ullmann and Sezgin mentioned in their catalogues to discover new Arabic fragments. For the Latin fragments I have consulted two early printed books and also a printed Latin text of Rufinus. I have been unable to consult a few Syriac fragments, but these would appear to add nothing which is not already known of Rufus' dietetic interests.

In this thesis I have followed a specific plan : not to quote frequently but to give the meaning of the text, either Arabic or Greek or Latin, in English. When it is necessary to quote, quotations are given accompanied by English translations as close as possible to the original meaning.

Having mentioned the manifold nature of my materials, it is time to discuss the content of the thesis. This thesis is

an attempt to give a general and synthetic picture of Rufus the man and his works by looking at his theory as well as practice. It is a study of Rufus' ideas on the causation of diseases, and of his methods in the recognition of diseases and their treatment. I have chosen these three topics to study for particular reasons. Rufus was a doctor and it is essential to identify both his practice and its theoretical bases. Quantitatively Rufus' surviving works and fragments are mainly pathological and therapeutic. Thirdly, Rufus won the Arabs' interest because of his practice which was based on a knowledge of physiology and pathology. By looking at these three general ideas, this thesis attempts to measure the level of originality in Rufus' ideas. nd by

This thesis is divided into six chapters. Chapter One is Biography where some biographical pieces of information on Rufus' life are discussed. I shall be arguing against confusing Rufus with Menius Rufus. Alexandria was his most likely learning place and Egypt was one of his possible places of practising medicine. I shall also describe the interest in Rufus' works which started with Galen and passed via the Arabs to the Humanists and then to modern times. I shall be concentrating on the list of Rufus' works which is given by ibn abi Usaibi a's, the Arabic biographer, as a possible way to measure the Arabs' knowledge of Rufus' works.

Chapters Two and Three constitute one unit : Aetiology where I discuss external and internal causes of diseases. Rufus' awareness of the causes of illness is not spelled out all the time. Yet it can be inferred from his therapy or from

his exhortations for prevention. Chapter Two is a study of the harmful influence of three external factors on the human body. These are air, water and the so-called external factors. Chapter Three is a study of the harmful influence of four internal factors: humours, anatomy, psychology and diet. We shall be seeing the important role of the internal causes in Rufus' schema of causes of diseases. I shall be arguing that the most influential causes of diseases, according to Rufus' understanding of the occurrence of illnesses, are humours and qualities.

In Chapter Four, *Diagnosis*, I discuss Rufus' bed-side medicine. In Medical Questions Rufus announces that the best method for a more precise diagnosis and a better therapy is to interrogate the patient or one of his family. I shall be giving a summary of this work and also looking for the application of Rufus' interrogative system, the value of observation and palpation, by studying two diseases melancholy and arthritis. For the importance of the so-called Krankenjournale, which is a collection of twenty two case-histories attributed by Ullmann, its editor, to Rufus, I shall be discussing its authenticity, and arguing that there is a very high probability that the first five cases which deal with melancholy belong to Rufus. However, it is not possible to ascribe the rest of the text to Rufus. I shall be also discussing the status of prognosis in some of Rufus' writings.

Chapter Five deals with therapy. I shall be looking at three specific diseases: melancholy, jaundice and lithiasis in

order to identify Rufus' method of therapy. My aim is to witness the impact of Rufus' knowledge of causation on his choice of therapy. Rufus' therapy consists of drugs, diet and surgery. Rufus is against surgical operations unless there is a necessity for them. Diet is a complementary and alternative measure to drugs and surgery. I shall be arguing that Rufus' choice of a particular therapeutic measure is influenced by particular factors. I shall also be paying some attention to the philological value of having the treatise On Jaundice extant in Greek fragments, as well as in Arabic and Latin versions. The comparison between these three versions is valuable for its relationship with translation in general from Greek into Arabic and Latin. This chapter concludes with a study of one of Rufus' recipes, the so-called hiera Rufi, which was very popular among the Arabs. I shall be arguing against Rufus' authorship of this recipe.

Chapter Six has the title Rufus among the Arabs. The Arabic materials have been so essential in filling in the gaps in our knowledge of Rufus and his ideas that it is inevitable to discuss when the Arabic translations of Rufus' works were made and to identify some of those translators. The ninth century was the most likely date, and Qusta Ibn Luqa was one of the translators. I shall also be arguing that the Arabs' knowledge of Rufus was both direct, through the translation of his works, and indirect, through a variety of second-hand sources. I shall be giving two extreme examples of how the Arabs responded to Rufus' teaching. The first example is a fantastic story while the second is a study of an Arabic

philosophical text. However, in most of the cases where Rufus is being quoted in Arabic texts it is for giving information, and the Arabic writers themselves make no direct comment upon him.

The study will conclude with addressing some of the difficulties on working with different sorts of materials. It will also suggest how one may further the studying of less known Greek medical writers and use Arabic fragments to fill in the gaps in our classical sources. There is also an appendix listing the names of the Arabic writers who quoted Rufus. In conclusion it will be clear that Rufus deserved the eulogy the ancients and the Arabs gave him. My study is relevant to historians of ancient and Arabic medicine as well as to those who are interested in the process of transmission from Greek into Arabic and the interactions between Greek and Arabic-Islamic cultures.

Chapter One. Biography

Chapter One. Biography

Introduction

In this chapter I shall discuss Rufus' position in the history of medicine as given by the ancient sources as well as by modern historians by tackling the problems of his identity, his time, his learning centre, and his places of practice. The Greek and Arabic lexicographers and biographers have preserved invaluable lists of Rufus' works, some of which are otherwise unknown. It is of great interest to study these lists in order to recognize the varieties of specialities Rufus might have possessed. One can also define the time that witnessed the beginning and the escalation of interest in Rufus' writings by tracing the number of editions and publications these works went through.

First we need to identify Rufus of Ephesus. There is a consensus among ancient, Medieval and modern authorities on Rufus' importance in ancient medicine. Galen, who is the meanest in terms of eulogising his predecessors as well as his contemporaries, expresses his admiration for Rufus' work On Melancholy.¹ In two further passages he commends Rufus for his efforts in preserving the ancient readings in the texts of Hippocrates ², as well as the proper interpretation of

¹ R.-D., p. 291= (Galen, V, p. 105).

² Galen, XVI, p. 636.

difficult passages.³

The Arabic sources provide us with some information about Galen's estimate of one of Rufus' works that bears the Arabic title On theriacs, poisons, the treatment of the poisoned and the composition of drugs according to the cause and time.⁴

كتاب روفس في الترميمات والسوم وعلاج المسومين وتركيب الهندية بحسب العلة والزمان

According to the biographical tradition Galen copied the book on white silk with a raw black silk and spent a lot of money on it.⁵

وانه عثره عنده كتبه في ديباج ابيضه بقرن اسود وانفق عليه جملة كثيرة

Later authors agreed with Galen. Oribasius, who quotes Rufus extensively, assigns him in his work Euporista the epithet "the great".⁶ The multitude of quotations in the writings of

³ Galen, XVII B, p. 93.

⁴ Al-Mubashshir ibn Fātiq, Mukhtar al-hikam wa mahasin al-Kalim, edited by Abd ar-Rahman Badawi, Madrid 1958, p.292; Ash-Shahrazūrī, K. Raudat al-afrah wa nuzhat al-arwah, Ms. Manch. 300, fol. 98 a -1; Ibn abi Usaibi'a, K. 'Uyūn al-anbā' fi tabaqāt al-aṭibbā', Cairo, 1882, vol.1, p. 85. Ullmann in his encyclopedia (Die Medizin im Islam, Leiden, 1970, p.75) mentions Περὶ θανασιμῶν φαρμάκων as a possible Greek title of the work.

⁵ Although it is hard to believe what the Arabic sources attribute to Galen, it is at the same time significant of how the Arabs estimated Rufus and expected Galen to share the same attitude especially when we can hear Galen, in his own words, expressing his admiration for our Rufus. Ibn abi Usaibi a , in his account of Rufus, has not found a better eulogy for Rufus than saying that " Galen mentioned him in some of his works, preferred him and quoted him " Cf. Ibn abi Usaibi a, op. cit., vol. 1, p. 33.

⁶ Oeuvres d'Oribase, ed. Bussemaker et Daremberg, vol. 5, p. 560, 6. Ibn Abi Usaibi'a (op. cit., vol. 1, p. 33) and Hajji Khalifa (Kashf az-zunūn 'an asami al-kutub wa-l-funūn, Tehran, 1967, vol. II, col. 1094, 1404) give the Arabic equivalent to the Greek title without any indication of the Greek source. Ruelle, in the introduction of the Paris edition (R.-D., p. vi, f.n.1), and Moritz Steinschneider (Die Arabischen Übersetzung aus dem Griechischen, repr. Graz, 1960,

Galen, and in the compilations of Oribasius, Aetius of Amida and Paul of Aegina reinforces such direct tribute.⁷ Moreover the Vienna manuscript of Dioscorides has a picture of Rufus in the company of Galen, Dioscorides, Nicander, Andreas, and two others.⁸ The significance of this picture is that Rufus is considered one of the leading writers on pharmacology, a topic on which we have little other direct information.

If we turn to the Arabic sources, we find that the translator and writer Qusṭā ibn Lūqā (b. 820- d. 912), who quotes him in some of his works, describes him as " one of the chief doctors, whose books we read ".⁹ The biographers Ibn an-Nadīm, Ibn al-Qiftī, Ibn al-Ībrī and Ibn abi Uṣaibi^{ca} each have an account of Rufus.

Ibn an-Nadīm who wrote his work in 987 A.D. describes him as "outstanding in the art of medicine ", and also that " there

p. 469) noticed the occurrence of the title in the Arabic works.

⁷ R.-D., pp. 291-452. Extracts from Alexander of Tralles are also included to help to understand Rufus' texts.

⁸ Vienna, Oest. Nationalbibliothek, Cod. Med. gr.1, fol 3. Ruelle, in the introduction to the Parisian edition, mentions that the other two figures, which appear with Rufus in the afore-mentioned drawing, are Apollonius of Citium and Crateuas. Cf. R.-D., p. v.

⁹ Qusṭā ibn Lūqā, K. Ikhtilāf an-Nās, ed. Paul Sbath, BIE 23, 1941, p. 134, 11. Qusta mentions Rufus in his work Kitāb fil-bah wa-ma yuhtaḡu ilaihi min Tadbīr al-badan fī sti^{ca} malihi, (ed. Gauss Haydar, Erlangen 1973) and also in Kitāb fī l-bah (ed. Najdat Ali Barhoum, Erlangen, 1974). Ar-Raḡīq an-Nadīm quotes the Arabic translation done by Qusṭā of Rufus' work On Wine. Cf. ar-Raḡīq an-Nadīm, K. Outb as-surūr fī auṣāf al-khumūr, ed. Ahmad al-Jundī, Damascus, 1969.

was none among the Rufi better than him".¹⁰ Although Ibn al-Qiftī and Ibn al-ʿIbrī hold the wildly incorrect view that Rufus lived before Aristotle, who, with Galen, made explicit references to Rufus' mistakes and offered proofs of his faults, and although they accuse him of being feeble sighted مدخل الذلّة and producing invalid proofs منهين النظر

in ملاحظ!

, there is something even in their writings that make us believe that they realized his importance as a physician. Ibn al-Qiftī (died 1248 A.D.) says that Rufus was a physician who followed nature, an expert in the art of medicine in his time, concerned with teaching and the treatment of diseases, on

¹⁰ Ibn an-Nadīm, al-Fihrist, Cairo, 1929, p. 405. One may wonder what Ibn an-Nadīm means by "Rufi"? Are they members of a school led by Rufus or doctors who have the same name or some other people from different professions who share also the name? Bayard Dodge in his translation of al-Fihrist renders it thus: "None of the members of the school of Rufus were superior to him". (Cf. Bayard Dodge, The Fihrist of al-Nadīm, Columbia University Press, New York and London, 1970, vol. II, p.686). Although it is possible that the Rufi mentioned are people who have the same name but differ in profession, it is preferable to be cautious in accepting that Rufus had a school and followers for we do not have any internal or external evidence that speaks of Rufus school or even its place. It is true that the tone of his treatise On the Naming of the Parts of the Human Body is of a lecturer but it could be of a father addressing his son rather than of a teacher to his pupils. We know also that there was a physician by the name of Rufus of Samaria who commented on Hippocrates. Cf. Franz Pfaff, "Rufus aus Samaria, Hippokrateskommentator und Quelle Galens", Hermes 67, 1932, 356-359. (On the interpretation of the tone of Rufus' treatise cf. Haller, Bibl. anatomica, vol 1, p.78; Robert Ritter von Töply, "Anatomische Werke des Rhuphos und Galenos" in Anatomische Hefte, I Abteilung. 76. Heft (25. Band, Heft 2) Wiesbaden, 1904, p. 345; see also Ibn al-Qiftī and Ibn l-ʿIbrī s.v.Rufus). One wonders what source Ibn an-Nadim used, especially when he is the only authority in both Greek and Arabic which renders such a term "Rufi". We know also that the afore-said Arabic biographers did not mention any Rufus except Rufus of Ephesus.

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which he has written works and opinions.¹¹ He adds that Rufus has many medical works which were translated into Arabic that are famous and well-known. Ibn al-^lIbrī (died 1286 A.D.), who closely follows Ibn al-Qiftī's account, says that Rufus was famous by that time in medicine, and concerned with teaching, in which he has written several works.¹² Neither biographers lists Rufus' writings. On the other hand Ibn abi Uṣaibi'a (died 1270 A.D.) believes that there were none of the physicians in his time equal to him.¹³

We can perhaps better understand Rufus' position among the Arabs by noticing that three of his works were attributed by them to Galen.¹⁴

¹¹ Ibn al-Qiftī, Tarikh al-hukamā', Leipzig, 1903, p. 185.

¹² Ibn al-^lIbrī, Mukhtasar Tarikh al-Duwal, Beirut, 1890, pp. 90-91. It is probably not an independent source. ✓
Synac

¹³ Ibn abi Uṣaibi'a, op.cit., vol.1, p.33.

¹⁴ Ibn abi Uṣaibi'a, op. cit., vol.1, pp. 95, 101. These works are: On the dissection of the eye and On jaundice. Hunain ibn Ishāq (Ibn abi Uṣaibi 'a, vol.i, p.101) explains how some works including Rufus' were attributed to Galen. In addition, ar-Rāzī says that the work On Clysters should be attributed to Rufus and not to Galen (Ar-Rāzī, al-Hāwī, VIII, p. 170). Moritz Steinschneider has also noticed ar-Rāzī's remark and given a reference (VIII,2 f.182 d) which might refer to ar-Rāzī's work al-Hāwī in manuscript. See M. Steinschneider, " Rufus, de morbo icterico etc." in Deutsches Archiv für Geschichte der Medicin, 1878, 1, repr. 1971, 1, p. 132.

Steinschneider argues that the reference in ibn abi Uṣaibi'a to Rufus' book On Health preservation (ibn abi Uṣaibi'a, I, p. 200) means a translation of the work done by Hunain ibn Ishaq, who only dealt with Hippocrates and Galen. He also noticed that the title of the work as the other sources render it is an essay on principles of health preservation. Cf. M. Steinschneider, " Rufus, de morbo icterico etc." in Dtsch.Arch.Gesch.Med., repr. 1971, 1, p. 133; idem, Die arabischen Übersetzungen aus dem Griechischen, p. 472. I disagree with Steinschneider on interpreting the word tafsir as translation. I understand it to mean interpretation and hence Hunain only commented on Rufus' text

Moreover we have more than thirty six Arabic scholars who mentioned and quoted Rufus, among whom are Ar-Rāzī, Iṣḥāq ibn ʿImrān, and Ibn Sīnā.¹⁵

Modern scholars share with their predecessors their admiration for Rufus. It is proper in this context to register some of their words of appreciation of this ancient physician.

Albrecht von Haller describes Rufus as an "illustriſ medicus" and an "inſignis ſcriptor".¹⁶ Wellmann ſays of him that Rufus is one of the really independent phyſician of the Chriſtian era ¹⁷, whereas Dagorn deſcribes him as one of the three great phyſicians of the empire before Galen.¹⁸ Ullmann deſcribes him as the moſt important phyſician after Galen while Deichgräber notes that the titles of his writings give the evidence of his amazing univerſality of reſearch intereſt.¹⁹

and did not translate it. See chapter ſix.
For ſome Arabic fragments of that book ſee ar-Rāzī, III, p. 27, 6; IX, p. 136, 15.

Gosſen alſo draws attention to the attribution of a Synopſis on pulse to Galen. Cf. Gosſen, PW, I A 1, col. 1209.

¹⁵ Cf. Ullmann, Die Medizin im Islam, pp. 72-6, 322, 345; Sezgin, Geschichte des Arabiſchen Schrifttums, III, pp. 64-8.

¹⁶ Albrecht von Haller, Bibliotheca chirurgica qua ſcripta ad artem chirurgiam facientia a rerum initiis recensentur, I, p. 78; Idem, Bibliotheca anatomica qua ſcripta ad anatomen et physiologiam facientia a rerum initiis recensentur, vol. 1, p. 78.

¹⁷ Max Wellmann, " Zur Geſchichte der Medizin im Altertum", in Hermes 47, 1921, p.4.

¹⁸ René Dagorn, " Al-Baladī: un médecin obſtétricien et pédiatre à l'époque des Fatimides du Caire", in MIDEO (1967), p. 90.

¹⁹ Ullmann, Die Medizin im Islam, p.71; Karl Deichgräber, Hippocrates' De Humoribus in der Geſchichte der griechiſchen Medizin, Mainz, 1972, p.34.

It is better to end with Daremberg's testimony in which he says that " if one consults the archives of medicine one finds in Hippocrates the germ of auscultation; in Rufus, Soranus, Heliodorus and Galen the torsion of arteries, in Herophilus and Rufus all the theory of movements of the pulse ".²⁰

His date

We have already seen what the ancients as well as the moderns thought of Rufus of Ephesus. Their high esteem as well as their appreciation were evident from their testimonies. Now it is of tremendous value for our study to set Rufus in his right time in history. Rufus of Ephesus, according to John Tzetzes (Chil. VI. Hist.44. 300), practised in the time of Cleopatra as her private physician.²¹ Ibn al-Qiftī and Ibn al-ʿibrī make him even earlier as they put him before Aristotle, who, along with Galen refuted, his false sayings.²²

On the other hand Galen on two occasions puts him among his modern predecessors, οἱ νεωτέροι .²³ In Suda's lexicon he is placed under Trajan (98-117).²⁴

Most of the scholars have rightly dismissed the Arabic

²⁰ Charles Daremberg, Histoire des sciences médicales, Paris, 1870, I, p.10.

²¹ Historiarum variarum Chiliades, ed. T. Kiessling, repr. Hildesheim, 1963 (1826).

²² see above.

²³ R.-D., p. 291= Galen, V, p. 105; XVII B, p. 956.

²⁴ Suidae Lexicon, ed. Adler, pars IV, Leipzig, 1935, p. 301.

tradition along with Tzetzes' statement and accepted Suda's testimonium on the basis of Galen's term neōteros.²⁵

Despite this general agreement on Rufus' time, they disagree among themselves about the precise date at which Rufus lived. Leclerc believes that Rufus was living at the commencement of the second century A.D.²⁶ The same opinion is shared by Gurlt, Neuburger and Diepgen.²⁷ Haeser, Gossen, and Ullmann believe that he did not live before the second half of the first century.²⁸ Wellmann places his floruit in the last third of the first century A.D. Sezgin maintains that to be called by Galen neōteros means that he must have been older by fifty years.²⁹

In order to be independent of the external evidence these scholars have tried to find out in Rufus' writings evidence which may support their opinions. First William Alexander Greenhill in the Dictionary of Greek and Roman Biography and Mythology explains that Rufus quoted Zeuxis and Dioscorides as

²⁵ E. D. Phillips has a peculiar view that Rufus was born under Trajan, but thus makes Rufus an elder contemporary of Galen. Cf. E.D. Phillips, Greek medicine, London, 1973, p. 171.

²⁶ Lucien Leclerc, Histoire de la médecine arabe, Paris, 1876, I, p.239.

²⁷ E. Gurlt, Geschichte der Chirurgie : und ihrer Ausübung, Berlin 1889, I, p.421; Max Neuburger, Geschichte der Medizin, I, 1906, p. 341 (see also the English translation by Ernest Playfair, I, London, 1910); Paul Diepgen, Geschichte der Medizin, I, Berlin 1949, p. 118.

²⁸ Haeser, Lehrbuch der Geschichte der Medizin, I, Jena, 1878, p. 336; Gossen, PW, I A 1 , col. 1208; Ullmann, Die Medizin im Islam, p.71.

²⁹ Wellmann, " Zur Geschichte der Medicin im Altertum", 1921, p. 4; Sezgin, Geschichte des Arabischen Schrifttums, III, p. 64.

well as being himself quoted by Galen.³⁰ Gossen builds his argument on the idea that Rufus was named by Galen neōteros as well as being mentioned by Damocrates who lived in the time of Claudius and Nero.³¹ Wellmann reinforces this supposition by stating that Rufus quotes Dioscorides and Rufus himself is quoted by Archigenes.³² Albrecht von Haller had earlier maintained the same idea about Rufus' date but proved it in a different way. He believed that Rufus was younger than Asclepiades and Archigenes and older than Galen.³³ Later on Haller changed his mind, finding it difficult to believe Suda's statement on the grounds that the text of Aetius that mentions Archigenes does not belong to Rufus but to Aetius himself.³⁴ He also considered that Andromachus (the physician of Nero) quoted him. As a result he refrained from putting him at any date.

One has to find a way through all these varied statements and arguments. First one cannot accept Wellmann's argument that Rufus is quoted by Archigenes for the speaker in the text is not Archigenes but in fact Aetius. Yet, I agree with Haller on his interpretation of the second passage of Aetius for it

³⁰ Edited by William Smith, London, 1880, vol.III, p. 668.

³¹ Galen, XIV, p. 119. For my interpretation of this document see the section (his name).

³² Wellmann, " Zur Geschichte der Medicin ...", 1921, p. 4.

³³ Haller, Bibliotheca botanica, vol. 1, p. 107; idem, Bibliotheca chirurgica, vol. 1, p. 78.

³⁴ Idem, Bibliotheca medicinae practicae, vol. 1, p. 172. The text which Haller alludes to (L.III Serm. II. c. 27) is the equivalent to the twenty seventh chapter of the eleventh book of Aetius Tetrabibloi (see R.-D., pp. 111-2.)

is clear to me that the speaker is Aetius himself. That means one cannot say that Archigenes quotes Rufus whereas the only mention of Archigenes by Rufus comes in the pseudo-work On Pulse.³⁵ Third Andromachus the physician did not quote Rufus, as Haller maintained, for the speaker in the passage is Galen himself.³⁶ The other figures mentioned by Rufus i.e. Asclepiades and Zeuxis belong to the time before Christ, Zeuxis to the third century B.C while Asclepiades to the first century B.C. In other words they are not helpful in dating Rufus.

It is left to us to say that where one puts Rufus in the end of the first century A.D or at the beginning of the second that is decided on the basis of Suda's testimonium solely, for Rufus does not say anything about himself or name any contemporary; ³⁷ all his figures come from the past and the only figure that may partly back up Suda's statement is Dioscorides, who lived in the first half of the first century A. D. In short, having tested all these views, one tends to place Rufus' activity at some time between the middle of the first century A.D. and its end, not very far from what the Suda says, in the reign of Trajan.

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³⁵ R.-D., p. 231.

³⁶ Galen, XIII, p. 92.

³⁷ The only mention of the contemporary by Rufus appears in his work On the Naming of the parts of the human body (R.-D., p.151, 134) and perhaps in the title of his work On Vomiting where he dedicates it to Potamonius, of whom we know nothing.

His name

On three occasions Galen mentions the name of a Rufus which may be different from Rufus of Ephesus.³⁸ In vol. XIII p. 1010 he speaks of Menius Rufus, whereas in XIII p. 92 and in XIV p. 119 simply of Rufus. That created a problem for scholars to solve : are the two or three Rufi i.e Rufus of Ephesus, Menius Rufus and Rufus identical? and if they are not, to which of them do the other two quotations belong ? In the Bibliotheca Graeca Fabricius maintains that Menius Rufus, who is mentioned in a relation with a medicament prescribed to the palsied and the trembling as well as to the nervous sympathetic affection, is a different person.³⁹ Ackermann in the fourth edition of the same encyclopedia expresses the same opinion, which is shared by Sprengel and others.⁴⁰ Yet Ruelle, in his introduction to Rufus' works, does not dismiss the possibility that the two names refer to the same person.⁴¹ But it is very unlikely that Menius Rufus was an Ephesian for the name Menius (in various forms) does

³⁸ There are also other incidents, but the context gives us all the probability that the physician mentioned is Rufus of Ephesus. See XVII A, 993, 1006; XVII B 29, 113, 956.

³⁹ Bibliotheca Graeca, vol. III, Hamburg, 1710, p. 104.

⁴⁰ Bibliotheca Graeca, ed. Harles, vol. IV, 1795, p. 714; Kurt Sprengel, Histoire de la médecine, traduite de l'allemand sur la seconde édition, par A.J.L.Jourdan, II, Paris, 1815, p.46.

⁴¹ R.-D., p. vii.

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not appear in any of the inscriptions from Ephesus.⁴² Although the possibility cannot be excluded, the large number of the Roman names found on Ephesian inscriptions would seem to make it a remote one. Having answered the first question one should answer the second : to which of them then do each of the other two quotations belong ?

The first quotation (XIII p.92) concerns the prescription of an anodyne medicament. Andromachus, the physician of Nero, does not attribute it to Rufus, for he is not the speaker, but this in fact, Galen, who does not reveal his reference.⁴³ That leaves the door open to the possibility of attributing the quotation to our Rufus.

The second quotation (XIV p. 119) is about some incense used by the Egyptians and is attributed by Damocrates to Rufus. We know that Damocrates lived at the time of Claudius and Nero. If this passage does relate to our Rufus, then it suggests that he was active somewhat earlier than is usually believed, and hence Wellmann and Ilberg rejected it on chronological grounds, as contradicting with the testimony of the Suda.⁴⁴ But we do not know, how the information in the Suda was obtained, and it is still possible to regard this quotation as

⁴² Die Inschriften von Ephesos, teil VIII, 2, Band 17,4 Verzeichnis der Eigennamen zusammengestellt von Johannes Nolle, Bonn, 1984.

⁴³ Haller believes that the reference in the quotation of XIII p. 92 is Andromachus, Wellmann shares the same opinion with him. Cf. Haller, Bib. med. pract., I, p. 172 f., idem. Bibl. bot., I, p. 107 f; Wellmann, " Zur Geschichte der Medicin", 1921, p. 4, f. n. 1,2.

⁴⁴ Wellmann, " Zur Geschichte der Medicin", 1921, p.4; Ilberg, Rufus von Ephesos, p. 20, f. n. 3; p. 36.

coming from a very early work of Rufus, who lived for another forty years. It is possible that Rufus, during his stay in Egypt (on which we will say more later in this chapter), must have learnt some Egyptian prescriptions including incense. In addition, Ibn al-Mubāarak attributes to Rufus the knowledge of an incense for driving off the snakes.⁴⁵ On the other hand, Damocrates may be, as Wellmann and Ilberg suggested, referring to another unknown Rufus, for the name itself is not uncommon.

Ruelle the editor of the Paris edition of Rufus' also looks kindly on the possibility that the inscription no. 11 from the great theatre in Ephesus which is about a person by the name of Ruffinus is actually about Rufus, taking Ruffinus as a version of Rufus.⁴⁶ He backs his assumption by alluding to ar-Rāzī's quotations. But this is highly impossible for I have not come across such nomenclature in Rufus' Arabic fragments. Second the name is followed by several ethnics only one of which is Ephesian, the second is Alexandrian which would also agree with our information about his learning place, but the third is Rhodian, which is not confirmed by any other testimonium. Third the inscription is dated by the name of Marcus Aurelius (regn.161-180) under whom Rufus could not possibly have lived. Finally, although there is a close etymological link with the name of Rufus, the two names are

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⁴⁵ Ibn al-Mūbāarak, K. al-Munqidh min al-halāk fī daf' maqar as-samā'im al-muhlika, Ms. Chester Beatty 3795, fol. 113 b 11. Ackermann in Bibliotheca Graeca refers to another Rufus mentioned in Galen, lib. de medicament. sec. gen. cap. 6 tom. XIII pag. 838, which I did not find.

⁴⁶ R.-D., p. vi. See also J.T. Wood, Discoveries at Ephesus, London, 1877.

not the same, and there is no need to posit such a suggestion ✓
here.

no mention?

His learning centre

Rufus does not speak about himself in his writings. For instance, he does not mention his birth-place, his home town, his school, his teachers, his pupils (if there were any), the places he has seen, or his contemporaries. In other words we are left completely in the dark if we are going to wait for direct statements to come from Rufus. However the only mention of a name of a person which we can infer is either one of his acquaintances or friends or even relatives is the name of Potamionius in the title of his work On Vomiting.⁴⁷ None the less one should be careful, for this may be an addition from Oribasius, in whose encyclopedia Rufus' work appears.

Despite this gloomy picture one can find one's way by looking between the lines and collecting the bits and pieces to form a picture of his life and career.

From the ancient sources we already know that his home town is Ephesus. It is important to inquire about his learning centre and the place(s) where he practised medicine.

Looking at Rufus' works one will be amazed at the various mentions of Egypt, which are not surpassed or even equalled by any mention of any other country or place, not even his home

⁴⁷ Cf. Orib., Coll. Med., VIII, 21. Ilberg believes that this Potamionius is a layman, i.e. Rufus is addressing his medical work to non-specialist for unannounced purposes. Cf. Ilberg, Rufus von Ephesos, p. 26, f. n. 5.

town Ephesus.⁴⁸ The name of Egypt and the Egyptians appear in a variety of different topics: pathology, anatomical terminology, therapy, ethnology and geography (water). Rufus generally expresses his admiration for the country. In his account of water, Rufus mentions that the Egyptian marshes are the most hygienic of all marshes.⁴⁹ Besides, he expresses his admiration for the Nile water.⁵⁰ In matter of hygiene Rufus records the purgatives the Egyptians generally used for the purpose of catharsis.⁵¹ In a different work, Rufus shows us his lasting interest in the Egyptian cathartics, when he says that in mild countries, such as Egypt, clysters can be introduced, for the natives are used to it, while the nations of the north or cold countries (Galatians, Thracians and Italians) cannot take active clysters.⁵² In a parade of ethnological information Rufus notices that people who live in the north (at Pontus) نيسيس, though they are flabby and red-haired are in fact lacking the heat that the inhabitants of

⁴⁸ The only occurrence of his town Ephesus is in his talk about a patient by the name of Myron of Ephesus. See Hans Gärtner, Die Fragen des Arztes an den Kranken von Rufus von Ephesos, CMG. Suppl.4, Berlin, 1962, p. 34, 29.

⁴⁹ Orib., Coll. Med., V, 3 p. 325, 6. The same passage was taken over in the sixteenth century and ascribed to Galen in the forgery Commentaries on the humours (Galen, XVI, p. 363) (Comm. III in Hipp. De hum. 3).

⁵⁰ Orib., Coll. Med. V, 3, p.329, 16; R.-D., fragment no. 66, pp. 342-3, 8-12.

⁵¹ Hans Gärtner, Die Fragen des Arztes, p. 46, 70.

⁵² Orib., Coll. Med., VIII. 24, pp. 213-214, 31-32.

Egypt as well as of Tarentum ^{تارنتوم}enjoy.⁵³

I believe the most important mention of the Egyptians at all is in his account On the Naming of the Parts of the Human Body.⁵⁴ He says: Δύο δὲ ἄλλαι τοῖς ὀστέαις τῶν κρατάρων

ὡσπερ λεπίδες ἐπιπεφύκασιν. ὀνόματα δὲ αὐτῶν παλαιὰ οὐκ ἔστιν, ἀλλὰ νῦν ἑτέθη διὰ τινῶν Αἰγυπτίων ἰατρῶν φαύλως ἑλληγνίζόντων.

As is clear from this passage, Rufus accuses the Egyptian doctors who have newly named the sutures of the skull of speaking bad Greek. Here emerge some interesting questions.

First are the mentioned physicians Greeks living in Egypt or Egyptians who have learnt the Greek language and are making some progress in the field of anatomy and onomatology? Whether they are Greeks or Egyptians, the most likely place for their teaching in Egypt is Alexandria, for it had a great and long-standing reputation for anatomy. Yet it is important to identify these doctors. First if they are Greeks, then we have a kind of prejudice against those who were not born and do not live in the Greek mainland or the islands. Or could it be an attack from a student or an ex-student against his masters or from a practitioner against his contemporaries ?

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If they are Egyptians who managed to learn the Greek language, that means that some of our information about the

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⁵³ Al-Baladī, K. Tadbīr al-Habālā wa-l-Atfāl, Ms. Royal coll. Phys. nr.8, Maq.II, 44. It is difficult to identify the Greek names of places from their Arabic forms. I have used the Lebanese edition of al-Mas'udī's book Murūj adh-Dhahb (edited by Charles Pellias, vol. 6, 1979) to identify Pontus. I assume that the Arabic word ^{تارنتوم} was misspelled for the word ^{تارطين}.

⁵⁴ R.-D., pp. 150-1, 129-135.

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interrelation and the interaction between the native Egyptians and the Greek colonists must be revised. There are many scholars who have devoted many of their writings to prove the impossibility of an ancient Egyptian medical influence on the rapid and illuminating anatomical achievements of the early Alexandrians headed by Herophilus. If the natives by the time of Rufus were contributing to anatomical terminology, the door then is then still open for accepting a possible influence in the early Alexandrian age as well. Second Galen in a well known passage states that the only place at his time that still teaches human osteology by dissection is Alexandria.⁵⁵ This Galenic text and Rufus' text in a way support each other but on the other hand contradict each other.

Rufus' text supports the Galenic by giving evidence for the reputation the Alexandrian centre held in matter of osteology and anatomy in general. The famous centre at the time of Rufus was still adding to medicine. On the other hand Rufus at the beginning of the afore-mentioned work laments over the past when they used to teach anatomy on the human body itself.⁵⁶ But he unfortunately has to demonstrate the external parts of the body on a child (or more likely a slave) and the internal parts on animals that are close to humans. If we are going to believe Rufus, the nomenclature then that is recently

⁵⁵ Galen, II, p. 220.

⁵⁶ R.-D., p. 134, 10. Ilberg interprets this Introduction as a realization of the better way carried out in the past by Herophilus. Cf. Ilberg, Rufus von Ephesos, p. 7. Kowalski also says that Rufus alludes in the same introduction to both Herophilus and Erasistratus. G. Kowalski, De corporis humani appellationibus, Diss. Göttingen, 1960, p.137.

introduced must have been given through a comparative study on animals and not on human beings (cadavers). Rufus himself in the same treatise mentions his newest discovery which was made on a female sheep.⁵⁷ In that case Galen's text appears misleading because it ignores the contributions of the Alexandrians, or Egyptians as Rufus calls them, to anatomical terminology. Galen, though he shows his knowledge of the reformation in anatomy in Alexandria at the time of his grandfathers, does not mention those Egyptians, and one cannot explain his silence over their contribution. However it is then important to put Rufus in time before any of the reformers Galen mentions in his account of the Alexandrian anatomy in order to give anatomy the possible time for reformation.⁵⁸

Despite all these problems, the mention of anatomy alludes to Alexandria as the possible place for Rufus to have been educated.⁵⁹ This is also supported by the number of the anatomical treatises Rufus has written, which show his

⁵⁷ R.-D., p. 159, 186.

⁵⁸ Galen, XV, p. 136. The reformers Galen mentions in his account are Marinus and Numisianus and their students Pelops (Galen's teacher) and Quintus.

⁵⁹ Allbutt says : "His fair anatomy points perhaps to Alexandria, or possibly Smyrna, as his school". Cf. Sir T. Clifford Allbutt, Greek medicine in Rome, p. 288. Smyrna was also known as a medical learning centre. It had an Erasistratean school and produced as well the head of the methodist school. But, although we have some evidence of Rufus being in Egypt we have no mention of his stay or education in Smyrna. Nevertheless one may tend, on the grounds of his general knowledge of Asia Minor, to suggest the possibility of his visit to Smyrna. Cf. V. Nutton, The Medical Profession in the Roman Empire, Ph.D thesis, Cambridge, 1970, pp. 171-2.

interest in the subject.⁶⁰ Vindicianus also puts Rufus among those who practised medicine and anatomy in Alexandria.⁶¹ Moreover the introduction of his work which alludes to the flourishing past in matters of anatomy also testifies that Alexandria must have been his learning centre. Ilberg uses the same argument, maintaining that the mention of the Egyptian physicians who speak bad Greek is evidence for his study of anatomy in Alexandria.⁶²

Ilberg maintains also that the interest in the Hippocratic writings can be linked with the same kind of teaching or instruction that we can find in Galen. Hence he asks a very interesting question about the place that could have witnessed Rufus' interest in the interpretation of the Hippocratic works: is it Alexandria or Ephesus, after his return from Alexandria, or somewhere else? ⁶³ The question of his anatomical activities and works made us believe that his study was in Alexandria, and the interest in the Hippocratic writings may indicate the place of either learning or

⁶⁰ Rufus' anatomical works are On the naming of the parts of the human body, On the anatomy of the parts of the human body and on Bones. There are some doubts about Rufus' authorship of the last two. Modern scholars (Wellmann, Neuburger and the Oxford Classical Dictionary) believe that Rufus' anatomical works show his acquaintance with Alexandria where he studied.

⁶¹ von Staden presents two testimonia from Vindicianus in which the latter includes Rufus among those who practised medicine and anatomy in Alexandria. Von Staden does not accept Vindicianus' testimony calling Rufus an Alexandrian anatomist. Yet he acknowledges his visit to Egypt. Cf. von Staden, Herophilus: the art of medicine in early Alexandria, 1989, pp. 52, 189.

⁶² Ilberg, op.cit., p. 3.

⁶³ Ibid., p. 41.

practice. It is well known that the study of the Hippocratic works was part of the Alexandrian curriculum. We also know that it was carried out in other places in the Hellenistic world.⁶⁴ Yet it is totally dismissive to maintain that Rufus' commentaries were his notebooks while he was a student for Galen's eulogy cannot be possibly given to someone who is merely copying his masters. On the other hand, we may agree with Ilberg and maintain that they may be a product of his teaching- if we believe that he has taught- or, even simpler, are published works without any implication of teaching. In that case, the places we think Rufus has been to, for his Hippocratic studies, could well have included Alexandria. In brief the interest in the Hippocratic works is likely to be a reflection of Alexandrian teaching, whatever the place that witnessed the actual publication of Rufus' exegesis.

Finally one can conclude that although there is a high probability that Rufus studied in Alexandria, particularly for his anatomical and Hippocratic interests, one cannot dismiss entirely the possibility that he was also educated at Ephesus especially when, certainly from 120s onwards, we know that doctors and teachers associated together in the Museum where they were organised under an archon and a priest.⁶⁵ He might have also known the developments of Alexandria only at second hand or later as a practising doctor.

Egypt Ep 27

⁶⁴ Galen studied in Smyrna before his visit to Alexandria where he listened to Hippocratic exegesis. Cf. Nutton, "Galen and Egypt", p. 3.

⁶⁵ Cf. V. Nutton, The medical profession in the Roman empire, p. 169.

Places of practice

Now we are going to discuss the possible places where he actually practised his medicine. Many scholars have announced their conviction that Rufus must have lived in Egypt.⁶⁶ Egypt, in fact, appears as at least one of the most likely places as we have plenty of information that show us Rufus' knowledge of the country and its particular diseases. Rufus, for instance, names a disease that occurs to children as the Egyptian ulcer.⁶⁷ In his work Medical Questions he gives an example of the dangerous effect of some kinds of water on health by a case of an Arab man who developed guinea worm.⁶⁸ The interesting aspect of the case is that it took place in Egypt. Moreover there is strong evidence from the language of the passage to make us believe that Rufus was either the physician or a student or a passer-by who showed some interest in the case; the latter is the weakest explanation.⁶⁹

⁶⁶ Wellmann, "Zur Geschichte der medicin", 1921, p. 6; Gossen, PW I A 1 col. 1208; Sarton, An Introduction to the History of Science, p. 281; Ilberg, Rufus von Ephesos, pp. 2-3.

⁶⁷ Orib., Coll. Med., lib. inc. 43, p. 150, 1-2 (C. M. G.). The Arabs have also preserved the same nomenclature. Cf. Al-Baladi, Tadbir al-Habala, Maqala III, 30; ar-Razi, III, p. 201.

⁶⁸ Gärtner, Die Fragen des Arztes, pp. 44-6, 65-9. For a discussion of this case and what is meant by the land of the Arabs see Chapter Two.

⁶⁹ It is not certain who Rufus asks to recognize the cause of the case. If they are the native Egyptians they could be either professional or lay. If they are laymen their knowledge of the harmful kinds of water in Arabia is impressive. But if they are the native doctors, that gives us two possible reasons for Rufus' stay in Egypt. The first is his actual practice of medicine which seems to

Concerning Rufus' visit to Rome and his practice of medicine there, there is no evidence to back up this suggestion. Despite this, many scholars have assumed that Rufus spent some time in Rome where he practised medicine. Sarton for instance argues that the name of Rufus, which means red-haired, was common in Rome by that time.⁷⁰ Gossen holds the same view that Rufus lived for a while in Rome.⁷¹ On the other hand, Wellmann maintains that Rufus did not live in Rome, for, though Galen several times mentions Rufus in terms of the commentaries on Hippocrates, he seems to have used Rufus indirectly via Sabinus.⁷² Ilberg answered this by saying that it is not enough for us to assume that Rufus did not live in Rome, for Soranus of Ephesus, who certainly lived in Rome, is much less quoted by Galen.⁷³ Ilberg himself does not think that Rufus practised in Rome for Suda's sentence that Rufus was living under Trajan at the same time as Criton is not

take place with the help of the native doctors (Greeks or Egyptians?). The second is that he is a student and he is learning how to treat such endemic cases. That makes Rufus appear an inquisitive student. Yet the context does not give us grounds to believe that Rufus' asking comes from a student. In conclusion one might assume that Rufus practised medicine in Egypt with the help of the natives, whatever their identities. Yet his story corresponds with his recommendation of asking surrounding friends or family when there is a hindrance to asking the patient himself, as in the case of speaking a different language. Cf. Gärtner, Die Fragen des Arztes, p.26, 10. See Chapter Four.

⁷⁰ Sarton, An Introduction to the History of Science, p. 281.

⁷¹ Gossen, PW, I A 1, col.1208.

⁷² Wellmann, "Zur Geschichte der Medicin", 1921, p.6.

⁷³ Ilberg, Rufus von Ephesos, p.3, f. n. 10.

sufficient.⁷⁴ Besides, Rufus, by contrast with Soranus and Galen, does not show any knowledge of latin terms. In brief, relying on the available evidence I tend to assume that Rufus did not live in Rome.

It is interesting to pursue the question about the possible places that witnessed Rufus' practice of the medical profession. Ilberg, in his indispensable work on Rufus that appeared in 1930, points at the ethnics of some of the patients mentioned in his writings (Samian, Ephesian, Magnesian and Miletan) and at Rufus' knowledge of the praxis of the physicians of Cos and Caria. All these places, as Ilberg noticed, are in Asia Minor and in the immediate area of his home town and they give us some information about Rufus' life.⁷⁵ In other words, one can take Rufus' familiarity with Asia Minor and its neighbouring islands to prove or at least to suggest that he practised there. First let us take his account of the physicians of Cos and Caria. The Carian doctors compose a purgative from the whey of milk with safflower.⁷⁶ The quotation is preceded by the verb οἶδα which usually stands for Rufus own familiarity with the thing mentioned. The Coan doctor happened to treat a woman with hellebore which is known to be the least expedient for ulcers. Yet the woman later on was freed from the ulcer. Although the doctor is not well known, he is well experienced in the qualities of

⁷⁴ Ibid.

⁷⁵ Ibid., p.2.

⁷⁶ Orib., Coll. Med., VII 26, p. 122, 127.

Hellebore.⁷⁷ The case does not give the name of the doctor but it might have taken place in Cos. The quotation is also preceded by the Greek verb ^{τα}, which alludes to Rufus' actual contact with the patient. Despite our lack of information, Rufus' mention of the ethnics of other doctors leaves us under the impression that he has been in the places mentioned, perhaps for the purpose of practice. As for the home towns of the patients, one tends to believe that he has been actually in Samos for the information Rufus brings on the festival, the danger of the case, and the conversation he has with the patient's family make us believe that he had practised medicine there.⁷⁸ The only mention of his town Ephesus comes from his presentation of a case of a wrestler whom Rufus, as the text shows, did not treat.⁷⁹ Yet it may testify to his praxis in Ephesus if one takes into consideration, as Ilberg noticed, that the river through which the man swam and was successfully cured from his illness runs by Ephesus itself. Two more patients whose home-towns Rufus mentions are a Miletan who was suffering from a venereal disease, for which Rufus treated him ⁸⁰ and Cleon of Magnesia who died, having suddenly stopped using the antidote he was taking for arthritis.⁸¹ It is possible that Rufus practised in both

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⁷⁷ Ibid., VII 26, p. 139, 182.

⁷⁸ Gärtner, Die Fragen des Arztes, p.42, 57.

⁷⁹ Ibid., p. 34, 29-30.

⁸⁰ Orib., Coll. Med., VI, 38, p.550, 29.

⁸¹ R.-D., p. 278, 13. Ilberg has emended the name from Clemagnitis to Κλέωνι τῷ Μάγνητι. Ilberg, Rufus von Ephesos, p.2. Since the text is a Latin version of the Greek original

Miletus and Magnesia. Yet one should be careful in taking the ethnics of Rufus' patients (which are not many) to mean that he has been there or practised there for we have a case of a Corinthian suffering from a venereal disease, who arrived at Rufus' place (which is not defined) for the sake of treatment.⁸²

In conclusion one can say that there is much evidence to maintain that Rufus practised in Egypt (Alexandria?), Ephesus, and Asia Minor in general; while a stay in Rome is at best very hypothetical.

We have already said that the mention of some places or even nations is not valid evidence for assuming that Rufus has been there as a visitor or a professional. Let us now test further this assumption. Athenians are mentioned three times in relation with onomatology : a different name than that of other doctors is given for the nasal passages, a different name for the discharge from the nose than that of Hippocrates, and a special name is given for the person who has a very loose scrotum.⁸³ The name of the Athenians suggests in the beginning a group of physicians, but in fact it stands for the

I accept Ilberg's emendation.

⁸² Orib., Coll. Med. VI 38, p. 550, 27. Daremberg thinks that Rufus' mention of the Corinthian patient, the Miletan one and the island of Cos lead us to believe that he lived in some town in Asia Minor whose temperature differs a little from that of Italy which Rufus places among the cold countries. Cf. Daremberg, Oeuvres d'Oribase, vol. II, p. 833. Ilberg, on the contrary, thinks that it is due to his acquaintance with Alexandria that Rufus speaks of the northern or the cold countries. Cf. Ilberg, Rufus von Ephesos, p.3. Perhaps it is an echo to his knowledge of A.W.P.

⁸³ Cf. R.-D., pp. 137, 33; 147, 105-8.

Attic dialect or perhaps the Koine Greek in which Rufus himself wrote. Another example is his citation of the Dorians of Sicily and their particular name for one part of the arm (the pointed part of the arm - the elbow) ⁸⁴ but there is no evidence for us to maintain that he has been in Sicily. In fact he wants to stress the linguistic differences which can be noted through reading or through hearsay. Another example is provided by his account of water which appears in Oribasius' Synagogai. For instance, he cites Delos, Pythopolis, Aethiopia....⁸⁵ Some of these names appear also in his work Medical Questions.⁸⁶ Daremberg, in his notes on the text of Oribasius, mentions several authors who mention the same places in connection with water.⁸⁷ The accounts correspond not only with the less familiar places but also with the more well known places such as Egypt. Nevertheless if we admit the possibility that Rufus uses a compilation or a handbook, his comments on the information he mentions may equally have been derived as much from books as from autopsy.⁸⁸

⁸⁴ R.-D., p. 143, 78-8.

⁸⁵ Orib., Coll. Med., V 3, p. 332, 24-5; p. 334, 29-32 ; p. 335, 35.

⁸⁶ Gärtner, *op.cit.*, p. 44, 63-4.

⁸⁷ Daremberg, Oeuvres d'Oribase, vol.I, pp. 628-632. Gärtner uses the same argument to infer that Rufus must have consulted a compilation.

⁸⁸ Daremberg remarkably notices that the repetitive use of clysters by the Egyptian athletes is not mentioned by any ancient author for the purpose of health care except by Rufus. Cf. Daremberg, Oeuvres d'Oribase, vol. II, p.833. Gärtner also noticed that the insalubrity of Arethusa has no parallel in the extant ancient sources. Cf. Gärtner, *op.cit.*, p. 99.

Works

The sole Greek biographical authority, the Suda lexicon, as well as the Arabic sources, Ibn an-Nadīm, Ibn abi Uṣaibi'a and Hajji Khalifa, handed on to posterity lists of Rufus' works. But these sources differ among each other in the number and the titles of his writings. The Suda gives eight titles with pathological, dietetic and therapeutic contents, but unlike the Arabic sources, it does not claim to list all Rufus' works. The correspondence between the lists of Ibn an-Nadīm and Ibn abi Uṣaibi'a is great, yet they differ in the following things. While Ibn an-Nadīm's stops with the number 43, including a repetition of no.18 On coitus, Ibn abi Uṣaibi'a extends it to 58.⁸⁹ They offer different translations of some titles; nos. 13, 22, 29 and 32 in Ibn abi Uṣaibi'a's list correspond to nos. 11, 22, 30 and 33 in Ibn an-Nadīm's list. No. 2 of ibn abi Uṣaibi'a's list is missing in ibn an-Nadīm's while no. 13 of ibn an-Nadīm's list is missing in Ibn abi Uṣaibi'a's. In general the two lists are identical, which may suggest that both biographers used the same source to compile their own works, or perhaps Ibn an-Nadīm found it unnecessary to go beyond number 43 or more likely that Ibn abi Uṣaibi'a succeeded in getting his hands on a variety of other missing reference from which he increased his list.⁹⁰

⁸⁹ Steinschneider, Die Arabischen Übersetzungen, p.470.

⁹⁰ Ibn abi Uṣaibi'a's bibliography of Galen shows signs of independent investigation of Galen's writings as well as knowledge of earlier bibliographers, and this may explain why his list of Rufus' writings is more extensive than that of Ibn an-Nadīm.

Hajji Khalifa, on the other hand, generally follows a different order from the other two biographers but adds nothing new; his list stops at no. 54: four titles nos. 2, 8, 17 and 51, are missing from Ibn abi Uṣaibi'a's list.

First of all one should first ask a question about the identity of these listed works : are they separate works or chapters from big works? This question has occupied the minds of some scholars. William Alexander Greenhill thinks that many of these titles are chapters of some big works. Ilberg, although he announces his doubt about the Greek fragment entitled by π. Ἀποσ κλημάτων¹ is content to say that Ibn abi Uṣaibi'a's list provides more titles than what ar-Rāzī mentions. While Sezgin cannot decide whether they are chapters from bigger works or separate works, Ullmann finds no objection in maintaining that they are independent works.⁹¹ First one has to be cautious that, although there have been successful efforts to identify and add new materials, the nature of these fragmentary works does not enable the reader to define whether they are parts of works or works themselves. Second, one tends to believe that titles or size of the works are not enough to judge the nature of the work, for writing on small topics was known to the Greeks as well as to the Arabs. Third the terms which the Arabic biographers used to differentiate between the various sizes of the works such as (Kitab and Maqala) are not always conclusive. For instance they call the work of (The

⁹¹ Cf. William Smith, A Dictionary of Greek and Roman biography and mythology, III, p.670; Ilberg, Rufus von Ephesos, pp. 33, 43; Sezgin, Geschichte des Arabischen Schrifttums, III, p.65; Ullmann, Die Medizin im Islam, p.72.

medicaments of) Diseases of the kidneys and the bladder (no.29 in Ibn abi Uṣaibi'a's list) Maqala. Finally although I tend to believe that the titles mentioned either in the Greek or the Arabic may actually stand for separate works, on the other hand there is nothing to prevent us from believing that some separate titles could have appeared within the bigger ones as well, such as To the laymen or The book of the forty chapters (Maqāla). Sub-headings such as On milk or on figs which are found in Oribasius could easily be misunderstood as whole works.

Ibn abi Uṣaibi'a's list excited the interest of the modern scholars such as Wenrich, Leclerc, Ruelle (Ruelle's is a second rendering of Leclerc's list) and Ilberg (Meyerhof translated it from the Arabic for Ilberg). Each in his turn rendered an interpretation of the Arabic list into latin, French and German. Ilberg and Ullmann gave a translation of the Arabic accompanied with the possible Greek titles. It is difficult to give here a long comparative study of the different lists but it is relevant to our study to give an English translation of Ibn abi Uṣaibi'a's list and some notes on some of its titles.

Ibn abi Uṣaibi'a's list

No.1 The book (kitāb) of melancholy, two treatises, one of his best books.

- No.2 The book of the Forty chapters (maqāla).⁹²
- No.3 The book of the naming of the parts of man.
- No.4 A treatise (maqāla) on the disease that is accompanied with hydrophobia.⁹³
- No.5 A treatise on icterus and bile.
- No.6 A treatise on the diseases of the joints.
- No.7 A treatise on the diminution of the flesh.
- No.8 The book of the diet of a person who is not attended by a doctor, two treatises.⁹⁴
- No.9 A treatise on Angina.

⁹² Ruelle gives Leclerc's translation which is *Traité en 40 livres ou chapitres*. He also notices that Wenrich omits it in his translation of the list. Cf. R.-D., p. xxxvi, f.n. 2. Ilberg gives the same interpretation. Yet he explains that the title does not mean what is known of Galen's works to the Arabs the 16 books or the Hippocratic corpus 60 books or Oribasius the 70 books or Aetius the Tetrabibloi, but it resembles Ḥunain's work the book of the ten treatises on the eye. Ilberg, Rufus von Ephesos, pp. 46-47. Ullmann gives as a reference Ibn al-Maṭrān, Bustan al-aṭibbā, fol. 78 b 11 without indicating the content of the text, which is a supportive evidence for the right translation of the title. Ibn al-Maṭrān quotes Rufus' work with the title *The book of Rufus, the forty treatises (maqāla)*. Meyerhof apud Ilberg argues against translating the title into "the book of forty articles, one treatise" because Ibn abi Uṣaibi⁴ uses the term *Maqāla* when he speaks of a short book or a bigger one consisting of more than one *Maqāla*. Though I agree with Meyerhof on rejecting such a translation I find his explanation not convincing for in the same list Ibn abi Uṣaibi⁴ uses the term *Kitāb* to indicate a book consisting of one part.

⁹³ Leclerc wrongly translates it thus: *de la cause de l'hydrophobia*. Cf. Leclerc, Histoire de la médecine arabe, I, 239. Wenrich makes the same mistake and renders it *de causis, e quibus hydrophobia oritur*. Cf. Wenrich, De auctorum Graecorum versionibus et commentariis, p. 221. Meyerhof apud Ilberg correctly translate it. For a discussion of hydrophobia in Rufus' works see Chapter Two.

⁹⁴ I agree with Ullmann who thinks that it is possible to identify this work with Rufus' work To the laymen. Cf. Ullmann, Die Medizin im Islam, p.74.

- No.10 The book on the medicine of Hippocrates.
- No.11 A treatise on the usage of wine.
- No.12 A treatise on the treatment of women who cannot conceive.
- No.13 A treatise on the principles of health preservation.
- No.14 A treatise on epilepsy.
- No.15 A treatise on the quartan fever.
- No.16 A treatise on pleurisy and peripneumonia.
- No.17 The book of diet (regimen), two treatises
- No.18 The book of coitus, one treatise.⁹⁵
- No.19 The book of medicine, one treatise.
- No.20 A treatise on what is carried out in hospitals.⁹⁶
- No.21 A treatise on milk.
- No.22 A treatise on (~~departure~~).⁹⁷

Theriaz

⁹⁵ It is twice repeated in Ibn an-Nadīm's list.

⁹⁶ I agree with both Ullmann and Gossen on identifying this title with the Greek title $\pi.\tau.\omega\nu\ \kappa\alpha\tau'\iota\alpha\tau\epsilon\lambda\epsilon\acute{\iota}\omega\nu\ \tau\omega\ \mu\epsilon\delta\iota\kappa\omega\tau\eta\varsigma$. Cf. Ullmann, Die Medizin im Islam, p. 74, Gossen, col. 1212. If one bears in mind that Hippocrates' treatise $\kappa\alpha\tau'\iota\alpha\tau\epsilon\lambda\epsilon\acute{\iota}\omega\nu$ was translated into Arabic as "in the doctor's shop" *حانوت الطبيب*, and that Ibn abi Usaibi'a mentions that Galen commented on that title saying Hippocrates' treatise should be called "A book of what is done in the doctor's shop" *كتاب النشيط التي تفعل في حانوت الطبيب*, one can then rectify Rufus' title to "a book of what is done at the doctor's shop". Secondly, we know of no civil hospitals in the first century A.D and it seems doubtful that Rufus wrote on that topic. See Ibn Usaibi'a, vol.I, p.32.

⁹⁷ Departure is an inconceivable word in a medical context. Leclerc turns the word into *الفراغ* , *الفراغ* to translate it into la distinction or du hoquet (hiccup). Wenrich does not mention it. Meyerhof via Ilberg retains the incomprehensible Arabic word *الفراغ* and translates it into Trennungsschmerz (pain of departure). He again gives a new possibility of a different reading *fi'l-qaraqir* (the noise of the stomach) which is far from the original word. Cf. Ilberg, Rufus von Ephesos, p. 44, f.n.4. Sezgin changes the word to give a peculiar translation "die Furcht" (the fear). Cf. Geschichte des Arabischen Schrifttums, III, p. 67. I do not

الفراغ (فراغ) لزان

- No.23 A treatise on virgin girls.
- No.24 A treatise on figs.
- No.25 A treatise on the diet of the travellers.⁹⁸
- No.26 A treatise on the stench (or fetor) of the mouth.
- No.27 A treatise on vomiting.
- No.28 A treatise on deadly drugs (medicaments).⁹⁹
- No.29 A treatise on (the medicaments of) the diseases of the kidneys and bladder.¹⁰⁰
- No.30 A treatise on whether an excessive administration of drugs (in the banquets) is useful.¹⁰¹

think that all these suggestions are acceptable. Yet, I tend to accept Steinschneider's translation "On sects" for it turns the word into a meaningful term. Cf. Steinschneider, "Rufus, de morbo icterico etc.", p. 137. Moreover an Arabic manuscript of ibn abi Usaibi a's text (no.489 of Haddad collection) at the Wellcome library backs up Steinschneider's translation as it has the Arabic word **الفرق** which means sects. It is important to add that there is also a work of Galen by the same title.

⁹⁸ Sezgin (op.cit., p. 66) assumes that this book might have been used by Ibn al-Jazzār in his work Zād al-musafir. I agree with Ullmann who, in his article " Neues zu den diätetischen Schriften des Rufus von Ephesos" in M.H.J, 1974, p.38, refutes this view for the difference in the subject between the two works. We have also some fragments which support this conclusion. See Ibn al-Mubarāk, al-Munkidh min al-halāk, fol. 113 a 1 ff.

⁹⁹ See the introduction to this chapter for Galen's appreciation of Rufus' book. See also ar-Rāzī, VI, 135,4.

¹⁰⁰ Ibn an-Nadīm gives the title without the drugs (or the medicaments), which is an accurate translation of the Greek title.

¹⁰¹ Leclerc translates this title to S'il est utile d'user largement de remèdes dans les répas ? (Leclerc, op.cit., p. 240), while Meyerhof apud Ilberg (p. 45) gives it thus: ob das viele Trinken von Medizin bei den Festmahlern nützlich ist. Wenrich, on the other hand, renders it: utrum multus adsiduusque medicamentorum usus prosit. Cf. Wenrich, op.cit., p.223. It is clear that the word that creates all these differences is **الولائم** I find myself following Wenrich for the meaning is clearer in this way though Leclerc disagrees with

- No.31 A treatise on hard tumours.
- No.32 A treatise on memory.¹⁰²
- No.33 A treatise on the disease of Dionysus which is suppuration.¹⁰³
- No.34 A treatise on wounds.
- No.35 A treatise on the diet of old people.
- No.36 A treatise on the advices of physicians.
- No.37 A treatise on clysters.
- No.38 A treatise on giving birth.
- No.39 A treatise on dislocation.
- No.40 A treatise on the treatment of the suppression of menstruation.
- No.41 A treatise on the chronic diseases according to Hippocrates.¹⁰⁴
- No.42 A treatise on the order of medicaments.
- No.43 A treatise on what the doctor should ask the patient about.
- No.44 A treatise on bringing up children.
- No.45 A treatise on vertigo.
- No.46 A treatise on urine.
- No.47 A treatise on the medicament called " Sousa ".

Wenrich, maintaining that his reading is not consistent with that of the manuscript.

¹⁰² Ibn an-Nadīm gives a different title with identical meaning.

¹⁰³ Hajji Khalifa has instead of Dionysus a misspelt name.

¹⁰⁴ I believe it is not a commentary on Hippocrates but an account on the chronic diseases as Hippocrates sees them. Galen has also a work by the title De victus ratione in morbis acutis ex Hippocratis sententia which is not also a commentary on Hippocratis.

- No.48 A treatise on the flux (going) to the lungs.
- No.49 A treatise on the chronic diseases of the liver.
- No.50 A treatise on what occurs to men losing breath.¹⁰⁵
- No.51 A treatise on purchasing slaves.
- No.52 A treatise on the treatment of an epileptic boy.¹⁰⁶
- No.53 A treatise on diet in pregnancy.
- No.54 A treatise on indigestion.
- No.55 A treatise on Rue.
- No.56 A treatise on sweat.
- No.57 A treatise on ileus.¹⁰⁷
- No.58 A treatise on epilepsy.¹⁰⁸

but he does l Ab
U aybi get h s dd and
f Hea ? //

¹⁰⁵ Qusṭā ibn Luqā, in his works fī-l-bah and fī-l-bah wa-ma yuhtaḡu ilaihi min tadbīr al-badan fī sti‘malihi, mentions Rufus' dedication of a treatise to the discussion of this topic. Cf. Qusṭā ibn Luqā, K. fī-l-bah, ed. Najdat Ali Barhoum, p. 36; idem, fī-l-bah wa-ma yuhtaḡu ilaihi min tadbīr al-badan fī sti‘malihi, ed. Gauss Haydar, p.43.

¹⁰⁶ Gossen believes that it is a part of a big work with the title π. ὀξέων καὶ κρονίων παθῶν. Notice that we have also Galenī Puero epileptico consilium.

¹⁰⁷ ar-Rāzī, VIII, p. 189.

¹⁰⁸ Ibn abi Uṣaibi‘a's title الإبصارة is not clear and it could be a transliteration of the Greek title epilepsy. Cf. Ilberg, op. cit., p. 45.

Here we will confine ourselves to the numbers of the editions Rufus' works have gone through, in order to recognize which works won the interest through the ages and which lost their place as time went by. It is of major interest to recognize also the languages into which these works have been translated.

Interest in Rufus' works in Western Europe started in 1540 with Melanelius who translated into Latin the work On Melancholy which is attributed to Galen, Rufus, Posidonius, Marcellus and Aetius of Amida.¹¹⁰ In 1542 Albanus Torinus translated into Latin a fragment of Rufus' treatise On the plague, which he took from Oribasius, Aetius and Paul, and published it in Basel. In 1552 Junius Paulus Crassus translated Rufus' anatomical works into Latin and published them in Venice. The following years witnessed an increased interest in Rufus' works. The anatomical treatises, with their

¹⁰⁹ For the editions of Rufus' works cf. the following: Haller, Bibl. anatomica; idem, Bibl. botanica; idem, Bibl. med. pract.; R. James, A medicinal dictionary, vol. III, London, 1745; Fabricius, Bibl. Graeca, ed. 1, 4; R.-D.; Ludwig Choulant, Handbuch der Bücherkunde für die ältere Medicin, Leipzig, 1841; William Smith, Dictionary of Greek and Roman biography and mythology; Gossen; Ilberg; Kowalski; Alexander Sideras, Über die Nieren und Blasenleiden; Richard J. Durling, A catalogue of sixteenth century printed books in the National Library of Medicine, 1967.

¹¹⁰ There are botanical verses which are doubtfully attributed to Rufus and appeared in Venice in 1499 with the title de viribus herbarum deo alicui consecratarum, again in the Aldine edition of Dioscorides in 1518, then in the second edition of Fabricius' Bibliotheca Graeca, and also in Leipzig in 1832. Cf. Gossen in PW. Nevertheless more eight botanic verses which are more confidently attributed to Rufus appeared in René Chartier's edition of Galen's works in 1679.

terminological significance, along with his treatise On Diseases on the Kidneys and Bladder, and the important fragment On medical purgatives were among the first works to win the attention of the editors. The following editions of 1554 (two editions, one in Greek and the other in Latin), 1555, 1556, 1564, 1567, 1581, 1604, 1726 testify to such a developing interest.¹¹¹ As one might have noticed, the first edition was in Latin. That these editions were parts of larger compilations which included also the works of others such as Hippocrates, Soranus, Lycus, Celsus, Galen, Theophilus, Oribasius, Aretaeus of Cappadocia, Aetius of Amida, Alexander of Tralles, Paul of Aegina and Vesalius is a more striking feature. The interest in such works may allude to the nature of the age with its interest in anatomy and also in the pathological and therapeutical works. One more noticeable feature of these editions is that they were in either Greek or Latin except that by Clinch (1726) which was in both Greek and Latin. In 1806 Ch. F. de Matthaei edited the first edition that excluded the anatomical works in favour of some of the pathological ones. His edition, which appeared in Moscow, included, as well as the Medical Purgatives, Rufus' treatise On Diseases of the kidneys and bladder, fragments from his work Satyriasis and Gonorrhoea, and fragments from the first fifteen books of Oribasius. Nevertheless it followed the old tradition by combining different works with those of Rufus,

¹¹¹ One should not forget the appearance of Rufus' quotations via Oribasius, Aetius of Amida and Paul of Aegina. Moreover there is the edition of the apocryphal work On the Pulse in Greek and Latin which is attributed, in Renè Chartier's edition (1679) of Hippocrates and Galen, to Galen.

i.e. Diocles of Carystus' letter to Antigonus the king as well as pseudo-Galenic work π. ὀφείων καὶ ἁρπυίων παθῶν . In 1845 Littré published the work known in Latin as De Podagra in the Révue de philologie.¹¹² The same work was re-edited by Henning Mørland in Oslo in 1933. In 1846 Daremberg published the apocryphal work known as Synopsis on pulse. In 1879 Ruelle, completing the work of Daremberg, published and edited Rufus' complete works as well as the Greek fragments. This was the first attempt to gather all the fragments in Greek that are scattered in the writings of Galen, Aetius of Amida and Paul of Aegina. Moreover it was also the first to collect the fragments of Rufus from the Arabic sources: from the writings of ar-Rāzī, Ibn al-Jazzār and Ibn al-Baiṭār in their Latin and even Greek versions. The interest in Rufus did not die out for Rufus' treatise On the Naming of the Parts of the Human Body was re-edited by Kowalski as a Göttingen dissertation in 1960. Two of the treatises which R.-D.'s edition included were published again in C.M.G.¹¹³ The first translation into a modern language was the French translation R.-D.'s edition

¹¹² There are three dissertations on Rufus' writings, the first is by Kühn with the title "Rufi Ephesii, De medicamentis Purgantibus Fragmentum e codice Parisiensi descriptum", Leipzig, 1831, the second is by F. Osann with the title "De loco Rufi Ephesii Medici apud Oribasium servato, sive de Peste Libyca", Giessen, 1833, and Henrike Thomssen's dissertation entitled "Die Medizin des Rufus von Ephesos" which appeared in Munich in 1989. Some of Rufus' Greek fragments were edited in Angelo Mai's collection of Classici Autores e Vaticanis codicibus editi (vol.IV. Rome 1831).

¹¹³ R.-D.'s edition has been reprinted in Amsterdam in 1973. Gärtner edited Medical Questions in 1962 for C.M.G, which reappeared in Teubner in 1970. Sideras edited On Diseases of the kidneys and bladder for C.M.G in 1977.

provided for some texts. von Töply in 1904 also provided a German interpretation of three anatomical texts i.e. : On the Naming of the parts of the human body, On the anatomy of the parts of the human body and On bones. Hans Gärtner and Alexander Sideras (see above) also provided German translations for the texts they re-edited. Brock in his extracts from Greek medicine made an English translation of the treatise Medical Questions and of some excerpts of On the Naming of the parts of the human body.¹¹⁴ An Italian translation of Medical Questions done by Giovanni Gentili appeared in 1969. Giovanni Gentili and Sergio Alleori translated and commented on the Latin version of the surviving fragments of Rufus' book To the Laymen.¹¹⁵ Walter Müeri also excerpted passages from Rufus' works in his book Der Arzt im Altertum which appeared in 1962.

As for the Arabic materials Sezgin and Ullmann in their catalogues have provided us with very generous references as to where one can find Rufus' fragments. Moreover Ullmann has edited and published two different works of Rufus from the Arabic. The first, which is known by its German title Krankenjournal, appeared in 1978. The second appeared in 1983 with the title Die Schrift des Rufus von Ephesos über die Gelbsucht, and also included a medieval latin version, which went under the name of Galen.

All these editions give us the direct evidence of the interest

¹¹⁴ Arthur Brock, Greek medicine, London, 1929, pp. 112-129.

¹¹⁵ cf. Pagine di Storia della Medicina 15, 1971, 38-63.

that Rufus and his works have won through the ages.

Conclusion

Ancient, medieval and modern authorities have testified to Rufus' importance in ancient medicine. Contrary to Greek as well as Arabic reports which put him before Aristotle and make him a physician of Cleopatra, Rufus was living in the second half of the first century A.D., not far from where the Suda placed him, the time of Trajan. Rufus of Ephesus was always known as such and should not be confused with Menius Rufus who wrote on pharmacology. Alexandria was very probably Rufus' learning centre and Egypt in general was possibly one of his places of practice. Asia Minor could have been both a place of learning as well as of practice. Rufus showed a variety of medical interests: in anatomy, pathology, pharmacology, therapy, dietetics, gynaecology and paediatrics. He also carried on the Alexandrian interest in the exegesis of the Hippocratic writings. Unfortunately some of his works have been lost and can now be approached only indirectly. Yet, Rufus' works with their various specialities won the Arabs' interest, so that they translated some of these works and hence saved some of his ideas from oblivion and, though mainly in fragments, handed them to posterity. The surviving Arabic lists of Rufus' works are additional evidence of what the Arabs knew. The Renaissance Humanists, on the other hand, translated some of Rufus' works into Latin. Their editions of some of Rufus' works point at their preference for his

anatomical, pathological and therapeutic works. His works appeared at that age only as parts of larger works which included other Greek writers. Modern scholars have also been interested in Rufus and his works. The first modern edition of Rufus' works was Ruelle-Darembert's edition in 1879. In this chapter I have pointed at the editions his works went through. In the following chapters I shall be studying particular aspects of Rufus' medical writings.

Chapter Two. External Causes of Diseases

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Introduction

Chapters two and three are concerned with exploring the various causes that Rufus, either implicitly or explicitly, holds responsible for illness. The aim of this study is manifold. Firstly, it helps to reflect the degree of Rufus' awareness, as a practitioner, of the various possible causes of illness and consequently it will show how influential this awareness was on his choice of methods and types of treatment. By looking at the most prevalent causes in his works this study will throw light on his school of thought, and attempt to assess how far he is typical or an original thinker.

In this chapter I shall be concentrating on only three of the causes of diseases in Rufus' thought. These are air, water and the so-called external factors.

I AIR

One of the most interesting points in Rufus' aetiology is the effect of pneuma or air on health. Yet, one has, as Allbutt has put it, to distinguish between the history of pneuma itself and the history of the school (pneumatism).¹ We shall start with the school.² Athenaeus of Attaleia, who was

¹ Allbutt, Greek medicine in Rome, London, 1921, p.225.

² It is worth noticing that modern scholars are divided among each other on Rufus' identity. While some identify him as a pneumatist or an eclectic, others deny such identification in favour of Dogmatism or Hippocratism. For the first group cf. Diepgen, Geschichte der Medizin, Berlin, 1949,

a follower of the stoic philosopher Posidonius, founded the school in the first century A.D. Though the school, according to Kudlien, survived till the fourth century A.D. it suffered a split when Agathinus of Sparta left the true school to establish the eclectic pneumatism.³ The school's main interest was in pneuma. In what concerns hygiene and pathology the dominant doctrine was the εὐτομία of pneuma : what favours pneuma is hygienic and what troubles it is a cause of disease. Diseases occur due to dyscrasis of qualities which exercise its disastrous influence on the pneuma's activities.⁴ They also occur by the obstructions of the passages that permit its free circulation through the body.⁵ The adherents of this school were Hippocratic in their aetiology and their

vol. I, p. 119 (eclectic with Hippocratic humoral doctrine); Tittmann, Was berichtet der arabische Arzt Rhases in seinem "Continens" aus Griechischen Ärzten über Zahnheilkunde?, Leipzig (Diss.), 1925, p. 10 (eclectic in the wide sense or pneumatist with inclination towards dogmatism); Puschmann, Alexander von Tralles. Original-Text und Übersetzung, nebst einer einleitenden Abhandlung, Vienna, 1878, vol. I, p. 53 (pneumatist and eclectic); Neuburger, Geschichte der Medizin, Stuttgart, 1906, vol.I, p. 341 (eclectic); Robert Fuchs in Pagel-Neuburger, Handbuch der Geschichte der Medizin, Jena, 1902, vol. I, p. 368 (eclectic). Gärtner defends Rufus' usage of a certain pneumatic term by saying that it does not mean that Rufus was pneumatic. Gärtner, Rufus von Ephesos Die Fragen des Arztes an den Kranken, Berlin, 1962, pp. 66-7. For the second group cf. Wellmann, " Zur Geschichte der Medizin im Altertum" in Hermes, 47, 1921, f. n. 2, p. 4; p. 6 (He denies that Rufus is eclectic or pneumatist but dogmatist); Ilberg thinks that Rufus is neither eclectic nor pneumatist but eclectic dogmatist. Ilberg, Rufus von Ephesos, ein griechischer Arzt in Trianischer Zeit, Leipzig, 1930, pp.3-4, 8, 15 ; Gärtner, op. cit., p. 56 (dogmatic); Allbutt, op. cit., p. 272 (independent Hippocratic).

³ Kudlien, s.v. Pneumatische Ärzte, PW, coll.1097-8.

⁴ G. Verbeke, L'évolution de la doctrine du pneuma du Stoïcisme à st. Augustin, Paris, Louvain, 1945, pp. 199-200.

⁵ Ibid., p. 519.

observations of climate and waters.⁶

If we look at pneuma as an idea we shall find that it has a long history starting from Anaximenes, and Diogenes of Apollonia among the pre-Socratics, and that it was frequently bound up with ideas of air, fire, innate heat, and soul.⁷ Before even the pneumatics, pneuma was recognized as a cause of disease in the Hippocratic work Breaths.⁸ In Anonymus Londinensis air or gas or wind is a substance which emerges from perissomata whatever they are and is linked to illness in the accounts of Hippocrates and Plato.⁹ It is not surprising therefore to find that pneuma or air plays an important role in Rufus' writings.¹⁰ However, Rufus' interest in air as a cause of illness, which we are about to discuss, is a reflection of his affinity with Hippocrates, not with the Pneumatists.

It is worth starting here by looking at air in Rufus' writings and investigating its possible connection with diseases.

In On the naming of the parts of the human body, Rufus defines air $\phi\upsilon\sigma\alpha$ as a perissoma and identifies it with a

⁶ Allbutt, op. cit., pp. 267-269; Kudlien, loc. cit., coll. 1104.

⁷ Allbutt, op. cit., pp. 225-228.

⁸ Kudlien, loc. cit., coll. 1103.

⁹ For an understanding of the term perissomata see the section on humours.

¹⁰ In ancient Egyptian medicine air or breath played a significant role. Cf. Steuer & Saunders, Ancient Egyptian & Cnidian medicine, Berkeley and Los Angeles, 1959, p. 24.

surplus of pneuma.¹¹ Nevertheless he says that the physicians define pneuma as that which we breathe.¹² On another occasion, he says that some believe that our breath goes through the nostrils to the brain.¹³

Moreover there is air in both cavities of the heart, one of which has more air than the other, therefore it is called πνευματικὴ while the other is called αἱματικὴ for it has more blood.¹⁴ Through the arteries it goes from the heart to the whole body.¹⁵ Air also plays an interesting part in pulsation. When the heart first receives it from the lungs in its cavity it contracts to supply the arteries.¹⁶ Arteries make possible the pulse, having been filled by the air received while the heart is empty.¹⁷

Let us now consider a different aspect of air i.e its

¹¹ R.-D., p. 165, 222-223.

¹² Ibid., p. 166, 288. Hippocrates defines air (pneuma) outside our bodies as ἀἴρ , while the one inside the body as φῦσα . Cf. Breaths, 3.

¹³ Ibid., p. 151, 136. Rufus might mean by "some" here the Coan physicians. See *infra*.

¹⁴ R.-D., On the anatomy of the human body, p. 177, 32.

¹⁵ Ibid., p. 183-4, 65. Wellmann maintains that the Coan school differs from the Sicilian school in believing that pneuma arrives first to the head from which it is distributed to the rest of the body, while the Sicilian school believes that the centre is in fact the heart from which pneuma is distributed to the rest of the body. One might assume that Rufus is, by saying that air is distributed from the heart to the rest of the body, more attached to the Sicilian school than to the Coan school. Cf. Wellmann, Die Fragmente den sikelischen Ärzte Akron, Philistion und des Diokles von Karystos, Berlin, 1901, p. 77.

¹⁶ R.-D., Synopsis on pulse, p. 221, 1-2.

¹⁷ Ibid.

role in illness.

Rufus explains some of the diseases' symptoms with air.¹⁸ He says that, in phrenitis, air continuously moves due to the sleeplessness of the patient. Hence the pulse is short and strong.¹⁹ In fevers, in the time of the exacerbation the diastole becomes greater and longer than the systole due to the passage through of the air.²⁰ Rufus, on another occasion, treats a patient from phrenitis and angina where breath is an important indicator for identifying the cause of the disease and recognizing the proper treatment. Rufus, having realised the proper treatment and applied it, uses breathing again to measure the improvement.²¹ On treating a female patient with an angina, her breathing is used to indicate the improvement in her case and her response to the applied treatment.²² In an another case also of angina, where one of the symptoms is the difficulty in breathing, the effect of the treatment is seen in the progressing easiness of his breath. There is also a strong link between the emergence of the tumour from inside

¹⁸ Langholf in a recent study of pneuma in the Hippocratic corpus and specifically the Epidemics tried to prove the compatibility of the pneumatic doctrine with the humoral doctrine. His study shows that some of the symptoms in the Epidemics are explained by accumulation or interception of air. Cf. Volker Langholf, "L'air (pneuma) et les maladies" in La maladie et les maladies dans la Collection hippocratique Actes dy VIe Colloque international Hippocratique, Québec, 1990, pp.339-359.

¹⁹ R.-D., p. 227, 2.

²⁰ Ibid., pp. 225-6,1.

²¹ Manfred Ullmann, Krankenjournale, Wiesbaden, 1978, VIII, 8-12. For a discussion of the authenticity of this work see chapter four.

²² Ibid., XVII,16.

to outside and the improvement in breathing.²³ Moreover the Arabic tradition has preserved the title of one of Rufus' works with the theme of stoppage of breath that occurs to men when they abstain from coition.²⁴

Air, as we have seen, is important in recognizing the disease, explaining the symptoms or prescribing the treatment, as a reflection of its role in pulse and in breathing. The air which we are talking about is the air drawn from outside. But it is time to consider a different type of air of which can be produced within the body, the possible methods of its production in the body and its probable link with illness.

Air is mentioned in relation to lethargy, cold and pleurisy, some of epilepsy's symptoms, drunkenness, false vision, and melancholy. Those are diseases in general related to the head.

One may construct the following general outline of Rufus' concepts. The head (the brain) naturally receives vapours for it has wide channels.²⁵ The humid head which is a weak head

²³ Ibid., XXI, 3,11,13-14.

²⁴ Qusṭā ibn Luqā, Kitāb fī-l-bah wa-ma yuhtaju ilaihi min tadbīr al-badan fī sti⁴ malihi, ed. Gauss Haydar, Erlangen, 1973, p.43. See also Qusṭā ibn Luqā, Kitāb fī-l-bah, ed. Najdat Ali Barhoum, Erlangen, 1974, p.36.

Ibn al-Maṭrān attributes to Rufus the saying that the destruction of the human being is due to two causes: the stoppage of breathing and the abstinence of food. Cf. Ibn al-Matran, Kitāb Bustān al-aṭibbā wa-rauḍat al-alibbā', National library of Medicine A 8, fol. 78 a 11.

²⁵ Ullmann, Krankenjournalen, IX, 11; R.-D., frg. 70, p.355, 4 ; ar-Raḳīq an-Nadīm, K. Outb as-surūr fī ausāf al-Khumūr, ed. Ahmad al-Jundi, Damascus 1969, p.227 ff. Ishaq ibn Imran, Maqāla fī l-malikhuliya, Ms. Munich 805, fol. 95 b, fol. 97 a. Flashar with some doubts attributes fol.95 b to Rufus but says nothing about fol.97 a. Cf. Helmut Flashar,

accepts also vapours.²⁶ In epilepsy the kinds of vapours the head receives are sharp and pungent ²⁷; on other occasions as in the case of drunkenness they are raw and uncooked.²⁸

In melancholy, the stomach and the intestines become dry because air, instead of going downwards to them, goes to the hypochondrium.²⁹ The responsible vapour is melancholic (black bilious vapour).³⁰ In the case of false vision, the cause of the illness is a bilious vapour.³¹ These vapours in health are either hot or cold or wet or dry.³²

We have already seen that air generally goes to the head, that some of it has to be in the stomach and that it can possess different qualities. It is time to ask questions about the possible place for its production in the human body and the measures that determine its qualities.

Melancholie und Melancholiker in den medizinischen Theorien der Antike, Berlin, 1966, p.100. Though I do not think that those two passages are genuinely Rufus I would like to include them here for they show some of Rufus' influence on Ishaq ibn Imran.

Hippocrates speaks of the veins of the head which have air within. Breaths, 8, 10. Head receives the purest air Morb. sacr. 19. The head receives vapours sent from the body as well as humours which it sends back unless they overwhelm it and engender in their turn illness. On Glands, 8.

²⁶ Krankenjournalen, X,2.

²⁷ Ibid., XIV, 1.

²⁸ ar-Raqīq an-Nadīm, op. cit., p. 227 ff.

²⁹ R.-D., frg. 70, p. 356,9. Diocles has emphasized the importance of the presence of heat and pneuma in the stomach for the purpose of digestion. Cf. Allbutt, op. cit., p. 136; also Wellmann, op. cit., pp. 85-6.

³⁰ Ishaq ibn 'Imrān, fol. 95 b; fol. 97 a.

³¹ R.-D., frg.116, p.442, 6.

³² Ishaq ibn 'Imrān, fol.97 a.

A stomach that is weak and unable to digest can bring about vapours.³³ The epileptics feel that sharp vapours or sharp and pungent vapours are arising from their stomachs.³⁴ When Rufus speaks of his explanation of intoxication he says that it is due to raw and uncooked vapours.³⁵ One may be permitted to believe that the source of the afore-mentioned vapours may be the stomach.³⁶ In case of melancholy it arises also from the hypochondrium.³⁷

On the other hand, one can find a source for vapours other than digestion. Rufus says that the epileptics feel that cold arrows ascend from their extremities.³⁸ Moreover the morbid matters in the body in the case of lethargy can vaporise and ascend to the head to injure it.³⁹

We have also mentioned above bilious and black bilious

³³ Krankenjournale, X, 2.

³⁴ Ibid., XIV, 1.

³⁵ ar-Raqīq an-Nadīm, op. cit., p. 227 ff.

³⁶ pseudo-Aristotle mentions an unconcocted exertion of breath that is engendered out of melancholic humour without any implication of digestion. Cf. pseudo-Aristotle, Problems, 916 b 6, 917 a 22.

³⁷ Ishāq ibn ʿImrān, fol. 97 a. Allbutt attributes to Diocles the belief in the production of air in the stomach, Cf. Allbutt, op.cit., p. 239. Cf. also Frg. 43 in Wellmann, op. cit., p. 135. (it is linked with melancholy). Aristotle maintains that air is produced in the body. Allbutt, op. cit., p.233. Jouanna correctly translates an Aristotelian passage to mean that air is in fact composed within the food. When food or drinks have already been absorbed, eructation occurs because air arrives in the upper regions. Jacques Jouanna, Hippocrate " Des Vents, De L'Art" Paris, 1988, p. 111, f. n. 5.

³⁸ Krankenjournale, XIV, 2.

³⁹ Ibid., IX, 11.

vapours which are generated from the afore-mentioned humours without the involvement of digestion.⁴⁰

Generally one can maintain that vapour arises from the stomach and it always arrives at the head (the brain) in sickness as well as in health. Yet, a weak stomach affects considerably the quality of such a vapour that it turns it to be a morbid substance. The head plays a part in developing the disease when it accepts, instead of resisting, the bad vapours and thereby the disease begins.⁴¹

We have already given a general outline of Rufus' concepts on the production, the distribution of the air or vapours in the body, and its harmful influence on health. The production of air inside the body enables us to compare Rufus with the well-known account of Anonymus Londinensis. We have stated above that the two figures who speak of the production of air in the body in relation to illness are Hippocrates and Plato. It is our aim to draw out the parallels

⁴⁰ Hippocrates thinks that heat (without any mention of digestion) can act upon the original substance to generate either bloody or bilious or phlegmatic vapours. These vapours usually turn to sweat. Breaths, 8. The importance in such a process is that once the air is generated it does not stay in the body but goes out where it turns to sweat. Wellmann says that the belief in the possibility of air generation from blood as well as from humours is Sicilian and it can be observed in Diocles, in the author of the Hippocratic treatise On the heart, in Aristotle and the Stoics. Cf. Wellmann, op. cit., p. 78. For further references see the following : For Diocles' opinion cf. frg. 43(Gal. VIII 185 f.,p. 137) in Wellmann. See also pseudo-Aristotle, 916 b 9-917 a 22. Plato also believes in the production of air from humours. Cf. Timaeus, 86 E- 87 A.

⁴¹ One word must be said here about the terms in use to designate vapour or air. The Arabic materials use the term vapour while Greek fragment no.116 uses the term "atmos". Greek fragment no. 70 uses pneuma.

and the differences between these three figures.

One can start with Hippocrates. Hippocrates, according to the doxographer, chooses air as a cause of illness for its importance in life. Yet, though he speaks of the importance of air outside our bodies, the air which is responsible for illness is in fact internally produced in the stomach. When the ingested food is of various qualities, or large quantities or strong and difficult to digest, residues occur which engender air that eventually causes diseases.⁴² However the doxographer does not attribute to Hippocrates mention of a specific disease caused by air,⁴³

Plato, on the other hand, according to the doxographer, says that air is one of the reasons for producing diseases (the others are phlegm and bile).⁴⁴ The doxographer or Plato does not say anything about kinds of food or its quantities nor anything about the stomach. Yet he mentions that air is the result of residues which may permit us in the light of the Hippocratic account to link it as well with food and digestion and maintain that the two accounts are identical.

One can notice the parallel between the two accounts and Rufus'. First air is present in the three accounts as a cause of disease or linked with disease. Second it is linked with

⁴² Jones, Anonymus Londinensis, V 35 - VI 43.

⁴³ Air in the famous Hippocratic work Breaths is responsible for generating diseases such as epilepsy, ileus, hydropsy, apoplexy, haemorrhage and fever. In The Sacred Disease paralysis and some symptoms of epilepsy are caused by intercepted air (7; 10).

⁴⁴ Jones, op.cit., XVII 44- XVIII 8.

digestion and food.⁴⁵ The big difference is the mention of perissomata. Rufus actually identifies air as a residue not as a thing that emerges from residues while Hippocrates and Plato do not identify air as a perissoma.⁴⁶ Third air, according to Hippocrates, which rises from perissomata turns to vapours and causes disease. The Hippocratic account interestingly explains why air causes disease. It links the illness with a change in the quantity of air as well as with the effect of excessive heat or cold on it. The Platonic account, unfortunately, does not increase our information about the direction air takes, presumably up, nor does it say something on the effect of cold or heat on air.

One can turn now to another aspect of air i. e. air when

⁴⁵ Rufus mentions some kinds of food that are able to produce air which he calls pneuma for instance grapes provide blood with air. R.-D., fragment no. 16 (Oribasius, Coll. Med. VI, 38, p. 548, 17-18); ar-Rāzī, al-Hāwī, X, p. 292. Moreover Rufus does not mention air that is taken with food.

⁴⁶ In his defence of the authorship of the Hippocratic and the Platonic accounts in Anonymus Londinensis against Pohlenz, Edelstein firstly links the Platonic account with the Platonic dialogue Timaeus. Secondly he suggests an emendation to A.L. so that the sentence would be read as air with residues not air coming from residues. He backs up his emendation of the text by maintaining that the disintegrated flesh of Timaeus can engender air. His emendation cancels the role of food and digestion in determining the quality of air. In other words air can be engendered from and by anything except from food and by digestion. In doing so disintegrated flesh thus appears as a "perissoma". If one accepts this emendation on the grounds that, as Edelstein correctly says, the text uses of the Aristotelian language, phlegm and bile which appear in the Platonic dialogue Timaeus as accompanying air that causes disease are called by Aristotle perissomata; flesh, either integrated or disintegrated is not called by Aristotle at all perissoma. I think that Plato in Timaeus means that air with this disintegrated flesh causes disease because the flesh prevents air from reaching its natural outlet. For Edelstein's view cf. Edelstein, Ancient medicine, Baltimore, 1967, pp.114-5.

it is outside the body.

Rufus accepted that air as one of the constituents of climate plays a role in disease, in particular in plagues.

He says: one can anticipate the approach of plague by looking at the bad present conditions of seasons and their unsuitability for health and also by observing the death of other animals.⁴⁷

He adds: for air can be the cause of engendering the plague. That can be seen by the death of all kinds of birds.⁴⁸

The relation between weather or climate and diseases is well established in the Hippocratic corpus.⁴⁹ Air can be the cause of an epidemic fever.⁵⁰ One finds also in the Epidemics descriptions of the climate before descriptions of the diseases or the cases.⁵¹ Moreover the anticipation of disease from the conditions of weather is Hippocratic. In Airs, Waters and Places Hippocrates speaks of the signs by which one can

⁴⁷ R.-D., fragment no.49 (Orib. Synop. VI, 25, p. 301, 304); R.-D., fragment no. 69, p. 352, 4; ar-Rāzī, XV, p.218. It is interesting to note that ar-Rāzī is quoting Rufus via Paul [of Aegina].

⁴⁸ R.-D., fragment no. 69, p. 352, 4. Littré believes that, though Rufus describes in this passage plague in general, it is probable that Rufus here speaks of the bubonic plague. Littré, Oeuvres d'Hippocrate, vol. V, p. 60. Notice the difference between Rufus' account and that of Thucydides. Thucydides explains the scarcity of the number of birds seen at the time of the plague in Athens by either that they avoided coming close to human corpses or that they died having tasted those corpses. Thucydides, II, L.

⁴⁹ Temkin says that the connection between climate and epidemic diseases remained until the second half of the nineteenth century. Cf. Temkin, The double face of Janus and other essays in the history of medicine. Baltimore, 1977. p.459.

⁵⁰ Breaths, 6; Nat. Hom. 9.

⁵¹ Epid.I, i,1-3; ii,4-5; iii,13; Epid.II i,3-4, Epid.III (11); Epid.IV , 16, 20-21; Epid. VI, vii 1 , viii 19.

predict whether the coming season will be healthy or not.⁵² Hippocrates differentiates also between the influence of the sudden changes of weather as well as the regular changes of the seasons on health.⁵³ Hippocrates in his work Humours puts the responsibility of engendering diseases on the sudden changes of seasons while the gradual ones are the safest.⁵⁴ Moreover there is a specification of the kinds of diseases when seasons are regular or irregular.

Rufus does not mention these differences between sudden and normal changes. Yet he shows some interest in the influence of climate on choosing the hygienic city. He advises his reader to flee from the city that has narrow lanes and high buildings.⁵⁵ The Arabic author, in whose work Rufus' fragment appears, explains the reason: the vapour will not be dispersed as it should be because of the narrowness of its lanes and the

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⁵² A.W.P., 10

⁵³ The relation between the change of weather in general and health appears in Philistion (A.L.) XX, 37 f. Yet he does not say explicitly the weather, but mentions that heat and cold, when they are in excess or deficiency, engender diseases; Hipp. Humours, 12, 17-8, 20; and Diocles, frag. 30 in Wellmann, Die Fragmente der sikelischen Schule; and Plato Leg. VII 797 E. Cf. Wellmann, op.cit., p. 81.

⁵⁴ Humours, 15; A.W.P. 11; Epid.I, section 2 (4), iii(13). In pseudo-Aristotle's Problems there is almost the same idea of the relation between health and climate. Cf. Problems Book I (859 a- 866 b) Chapters 3, 6-12, 17, 19-21 and 23-8. Wellmann alludes to Aph.III, 1. as a further reference. Wellmann, op.cit., p. 111. Sudden changes are considered beneficial in Epid III, book 3, 15.

⁵⁵ 'Alī ibn Riḍwān, Risālah fī daf' madārr al-abdān bi-ard Miṣr, translated with an introduction by Michael W. Dols; Arabic text edited by Adil S. Gamal. University of California Press, 1984, p.14 (Arabic text).

height of its buildings.⁵⁶

I have tried here to give a general account of the influence of air on health. Air that is internally produced or that which enters the body or air as a component of climate, each of which has an influence on the human being. This tripartite division of air has its own presence in the Hippocratic corpus where the influence of climate is recognized while the air inside the body causes illness because of interception or accumulation.

The next factor that affects health is water.

II Water

While the surviving Greek and Arabic fragments clearly testify to Rufus' great interest in water, its kinds (river, marsh, rain, spring, well, snow and ice), and its benefits or harm to health in general ⁵⁷, his relatively complete works On the diseases of the Kidneys and bladder and its fragments in Paul of Aegina's work ⁵⁸, his work De Podagra and its Arabic fragments, and the well-known work Medical Questions show a specific concern with three harmful effects of water in

⁵⁶ Ibid. Galen believes that a (valley) which is surrounded by high mountains does not receive air. Oribasius, Synopsis I, 24, pp. 39-40.

⁵⁷ Cf. the following: Orib.Coll. Med.V, 3; R.-D., frg. 66; ar-Razi, I, pp. 39, 34, 46, 59, 143,163; VII, p. 302; XI, p. 199; Ibn al-Baitar, IV, pp. 130-1.

⁵⁸ Alexander Sideras, Über die Nieren- und Blasenleiden; R.-D., fragment no. 117.

relation with three specific diseases lithiasis, guinea worm and arthritis.

It is a major concern to investigate the nature of the link between the quality of the water and each of these diseases and to detect possible contributory factors in the development of each disease. One has to look for some traces of influence upon Rufus' ideas concerning each case.

Rufus holds water as a major cause of lithiasis. Not every kind of water can do this, but only river and marsh water ποτάμια καὶ λιμναία⁵⁹; the water which has muddy sediments ⁶⁰; and water that is clear without containing sediments but excessively hard and cold ⁶¹; all of which are capable of

⁵⁹ Sideras, op.cit., p.124, 30. Rufus expresses his disdain for rivers that faces the south except the Nile, and for marsh water except for the Egyptian marshes (frg. 66, p. 342-3, 8-12). For his general ideas of good and bad water cf. Orib. Coll. Med. V.3; frg. 66, p. 342 ff.

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⁶⁰ Sideras, op. cit., p. 154, 14.

⁶¹ Ibid, p. 154, 15. In Medical Questions Rufus mentions that water in general can bring on lithiasis without any specification of its type. Gärtner, op.cit., p. 44, 63. Rufus believes that cold water is not useful for digestion nor for evacuation. It is bad for nerves, chest and ribs. It can cause convulsion, tension and rupture in the chest that makes some expectorate blood and causes suppuration. Cf. Oribasius, Coll. Med. V, 3, p. 328, 11. On the other hand he is in favour of lukewarm and hot water. Cf. R.-D., frg. 66, p. 346-8, 28-35. ar-Rāzī, and Ibn al-Baiṭār attribute to cold water good effects on nerves. I tend to believe that there is a mistake in translation for the same account appears in Greek attributed to hot or ordinary water. Cf. ar-Rāzī, I, pp. 43, 46; Ibn al-Baiṭār, IV, p. 130. Rufus also attributes to cold water a bad effect on menses. Aetius of Amida, XVI, p. 71. Yet Rufus believes that Nile water provokes the menses. Cf. Oribasius, Coll. Med. V, 3, p.329, 16. Hot water has the same effect. Cf. frg. 66, p. 347, 32. Hippocrates in A.W.P.4, says that in cities that face the cold winds, their waters generally are cold and hard. " As to the Women, firstly many become barren through the waters being hard, indigestible and cold. Their menstrual discharges are not healthy, but are scanty and bad. Then childbirth is difficult, although

producing lithiasis in the kidneys and bladder.

In maintaining that water is responsible for the disease Rufus sides with Hippocrates who talks about it in his work Airs, Waters and Places. Hippocrates believes that water with sediments is capable of producing stones in those who have a fiery stomach, bladder, and consequently an inflamed neck of bladder which lets out only the finest substance of urine and keeps the thickest to form stones eventually.⁶²

Hippocrates' account contains four important elements. First: not every water is dangerous to health. Second: lithiasis does not occur in every one. Third: heat is essential in the production of the stones. Fourth: there must be some matter out of which the stones can be produced (in our case it is the sediments in the water).

Rufus agrees with Hippocrates on the first two points. Nevertheless he does not ignore the impact of heat in the development of such a disease. In his treatise On the diseases of the kidneys and bladder he states that heat can act upon a cold bladder by drying up the sediments and forming the stones

abortion is rare. After bearing children they cannot rear them, for their milk is dried up through the hardness and indigestibility of the waters, while cases of phthisis are frequent after parturition, for the violence of it causes ruptures and strains. Children suffer from dropsies in the testicles while they are little, which disappear as they grow older. In such a city Puberty is late." (Jones' translation, Loeb, vol.1).

⁶² Hippocrates A.W.P.9 (Littré, II, p.36 ff; Loeb, I, p. 95 ff.). Hippocrates enumerates among the kinds of water that is most likely to contain sediments large rivers into which other rivers flow. In frg.no 66 Rufus considers that the good river water is that which flows perpetually from its sources and does not mix with other rivers. In Humours XII (Littré, vol. V; Loeb, vol. IV) Hippocrates considers water a reason for producing lithiasis without the mention of any sediments.

⁶³, while in fragment no.117 he specifies the location of the heat as in the kidneys and the bladder and considers it the effective cause.⁶⁴

One tends to believe that Rufus does not maintain that heat is an internal attribute of those organs for in the first statement heat is an external factor which in turn acts upon the bladder. While it is hard in the second case to decide whether heat is an internal attribute or an external agent. An Arabic fragment can provide us with some sort of solution. According to ar-Rāzī Rufus declares that excessive fatigue leads to lithiasis in kidneys.⁶⁵ It is known that exercise and fatigue are linked with heat. In other words one can maintain that heat which is produced by fatigue or exercise or perhaps in other way acts upon the bladder, and with the help of the kinds of water that mentioned, brings on lithiasis. In other words heat is not an internal attribute but in fact an external agent which affects the kidneys as well as the bladder. In such a matter Rufus agrees again with Hippocrates.⁶⁶

⁶³ Sideras, op.cit., p.156, 17.

⁶⁴ R.-D., p. 444, 10-11. Ruelle has included in the edition some relevant passages from Alexander of Tralles' work not as authentic fragments of Rufus but in order to help in understanding Rufus' ideas. Alexander of Tralles mentions (fragment no. 84 in R.-D.'s edition) a fiery heat as an effective cause in the operation. R.-D., p. 389, 2-3.

⁶⁵ ar-Rāzī, X, pp. 109, 141.

⁶⁶ There is another account of the disease by Hippocrates in Morb.IV, 55 where he specifically talks about it as an ailment of children. Pseudo-Aristotle (Problems, 895 b 143) has also an account of the disease in which he speaks of the innate heat of the bladder. Lonie is not sure whether the heat is innate or not in Morb. IV while he is sure that it is an

Water, as we have already noted, is responsible for providing the matter needed to produce the stones by the way of its sediments. It is interesting to note that water cannot be the only provider of matter needed in lithiasis. Rufus mentions the effect of undigested food in developing the disease ; and Hippocrates also mentions the effect of over-warm, bilious and un-healthy milk. He also in Morb. IV mentions that milk, when it is impure and containing earthy and phlegmatic substance (without mentioning digestion) can generate the disease in children.⁶⁷ Yet eating earth in children already grown can also generate the disease. Nevertheless Rufus considers that humours can provide the matter. Such humours are gluey, thick and burnt as well as thick and earthy.⁶⁸ Yet he does not say anything about whether

external in A.W.P. Cf. Lonie, The Hippocratic treatises " On generation" "On the nature of the child" "Diseases IV", Berlin, 1981, pp. 355, 360. I tend to think that it is not an innate but an acquired quality of the bladder in such a passage. It is also noticeable that although Hippocrates assumes in the afore-mentioned passage that phlegm acts like a glue to gather the particles of the matter to form the stones Rufus does not mention any sort of matter or humour that performs such a job. It is also worth noticing that Hippocrates in A.W.P. does not talk about such a matter.

⁶⁷ For Rufus see Sideras, op. cit., p. 154, 16. Hipp. A.W.P.9. Lonie is wright in noticing that while in A.W.P. it is not clear whether the sediment is contained in the milk or comes from elsewhere, it is clear in Morb. IV, 55 that milk has sediments which are the provider of the matter to the disease. Cf. Lonie, op. cit., p. 353. The pseudo-Aristotelian account mentions the earthy sediments that cohere together and form stones. We do not know the source of such an earthy matter.

⁶⁸ Cf. R.-D., fragment no.117, p. 444, 10. For Alexander of Tralles' similar opinion see fragment R.-D., frg. no. 84, p. 389. It is noticeable that in another passage of Hippocrates phlegm is the only provider of matter for the stones in the kidneys, while the bladder cannot have stones. Cf. Lonie, op.cit., p. 357.

water can be the producer of such types of humours or some other substance. Finally one can say that Rufus recognizes the necessity of having heat, as well as matter for the production of the disease. Whether this matter can be produced by water only or some other substance, is something on which Rufus remains indifferent.

It is worth noticing that Rufus has paid attention to the gender and the age of the patients of this disease. For instance he believes that it attacks men more than women.⁶⁹ Hippocrates also maintains that women are less liable to produce lithiasis.⁷⁰ The reason the two medical authorities give is anatomical. The female urethra is wide, short (and straight according to Rufus) while that of the male is narrow and long.⁷¹ Hippocrates adds that the female urethra opens directly near the vagina while it does not in the male. Hippocrates also adds a funny idea that women are less liable to the disease for they drink water more than men and they do not masturbate.⁷² Rufus and Hippocrates show some concern for

⁶⁹ Sideras, op. cit., p. 116, 8-10; p. 154, 16.

⁷⁰ Hippocrates, A. W. P., 9.

⁷¹ Soranus speaks of such anatomical differences between men and women. He says that bladders in women are larger than in men. The neck of the bladder in women is straight, while in men curved. Cf. Soranus of Ephesus, Maladies des femmes, I, 5, pp. 15-16, = Ilberg I, 18, p. 12. Pseudo-Aristotle does not talk about any generic differences. Pseudo-Aristotle is concerned with the animal versus the human in what concerns the disease (Pseudo-Aristotle, 895 b 143). He maintains that some animals such as fish and birds do not develop the disease for they do not have bladders while other animals do not have it because their bladders are bigger than those of humans.

⁷² One might explain the connection between drinking much water and the non-liability of women to lithiasis with its analogy of flowing streams that get so washed that no

the age of the patients. They both maintain that it attacks children and old people.⁷³ Yet Rufus thinks that children are more liable to contract it for they drink cold water that suits those who are growing, while Hippocrates maintains that it is due to the milk the children suck, and hence makes it more likely to be a children's disease.⁷⁴

Our second disease that water can engender is *Dracunculus Medinensis* or Guinea worm.

Guinea worm

While encouraging the physician, his reader, to inquire about almost everything that affects his recognition of the case and his ability to prescribe the proper treatment, Rufus puts some stress on the importance of inquiring about water and its qualities especially when the physician is a foreigner.⁷⁵ He then gives an example, to reinforce his

sediments are retained.

⁷³ Sideras, op. cit., p. 154,16. Hippocrates, Aph. III, 26.

⁷⁴ Hippocrates Morb. IV, 55. Cf. Lonie, op.cit., p. 353. Though Rufus does not explain how cold and hard water causes lithiasis, one might think that cold can freeze the sediments of water and hence form stones. It is difficult to explain Rufus' linkage of cold water with growth for Rufus is one of the authorities who believe that children are cold and that they need wine, rather than water, as the former suits those who are growing. Cf. Orib. Coll. Med., lib. inc., 20, p. 159.

⁷⁵ Gärtner, op.cit., pp. 44-46, 63-69. In Rufus' fragments one can also see the same exhortation for asking the natives about water. Cf. Oribasius, Coll. Med. , V, 3, p. 334; R.-D., fragment no. 66, p. 343,14.

argument, from his clinical experience. He says that he has seen in Egypt an Arab man suffering from a disease which is called ophis. He carries on to describe its symptoms and gives an application of his preaching.

He says : I asked (presumably the natives) whether the disease was common among the Arabs.

They answered: it is a disease among the Arabs and those who arrive at their country . They added : its main cause is their drinking water.⁷⁶

The most important aspect of this quotation is water's responsibility for a certain disease. Rufus gives a description of the disease and its symptoms.

He says : It moves and turns in the flesh like snakes especially in the thighs and the legs and also in the other parts of the body.⁷⁷

He adds : When it is about to peep out the patient is in pain and fever, and (the spot) swells as an abscess until passing through it becomes damp and putrefied.⁷⁸

The thing Rufus describes is in fact a worm, which Gärtner, the editor of the text, identifies with *Dracunculus Medinensis*.⁷⁹

Rufus names the disease "ophis". Gärtner's reading of Rufus' text explains ophis as a word means a "neuron" in the

⁷⁶ Gärtner, op. cit., pp. 44-6,65-69. However, it is ironic that Rufus cited his story to validate his assumption of the importance of asking about water, yet he did not in fact ask about it. The implication of water came in the answer of the natives. In other words one can say that chance helped Rufus to realize the importance of inquiry about water, an experience he likes to share with his readers.

⁷⁷ ar-Rāzī attributes to the author of the book of signs an identical description of the worm. He says it crawls as snakes. ar-Rāzī attributes to a writer called the Jew his calling of the worms the snakes. Cf. ar-Rāzī, XI, pp.290-291.

⁷⁸ Gärtner, op.cit., p. 44, 67.

⁷⁹ Ibid, p.100.

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Greek language. Gärtner's reading implies that ophis is an Arabic word which was used by Rufus to designate the disease. It is strange to find Rufus, whose interest in anatomical terminology and his efforts to correct the already accepted names of some diseases as well as to canonize new ones are well known, content with adopting an Arabic name of the disease instead of giving it a Greek name.⁸⁰ This seems hard to explain especially when we learn that the earliest Greek account of the disease is by Agatharchides which goes back to the second century B.C. In such an account Agatharchides gives the worms the name dracontia.⁸¹ And there is a high possibility that Rufus had known about Agatharchides' account and his designation. Moreover ophis is not an Arabic but a Greek word which means a serpent. Its Greek synonymous is dracon while dracontia is its diminutive noun. Reading the critical apparatus gives a solution to this problem. Kudlien has suggested deleting the sentence which describes ophis as a neuron as a gloss. Deleting it would make the Greek text more comprehensible and conforms with our knowledge of Rufus as an expert in medical terminology.⁸²

⁸⁰ According to Hans-Jürgen Thies, the editor of the Arabic text Fi ad-daa al-musamā diabites of 'Abd al-Latīf al-Baghdadī, Daremberg maintains that Rufus has established the term διαβόλια εις ούρα. This term reappears in Galen and in its Arabic garment in Arabic medicine. Cf. Hans-Jürgen Thies, Der Diabetestraktat Abd al-Latif al-Baghdadi's, Bonn, 1971, p. 64, f.n.1.

⁸¹ Plutarch, Symposiaca, VIII, 9.

⁸² In his 1970 Teubner edition Gärtner has kept the sentence which Kudlien suggested to be deleted. He cites a pseudo-Galenic text to support his reading of the text. Yet his Galenic text is not fully clear. Besides Galen's text defines dracontion as a wound not as a neuron (nerve) as

Galen, Pollux, Aetius of Amida who quotes Leonidas' account, Paul of Aegina who uses the accounts of both Soranus and Leonidas and also Actuarius mention the disease.⁸³ Yet, all of them are silent about Rufus' account. Galen, though he himself did not treat the disease, was content to say only that he heard about it, without specifying his source of information. Aetius of Amida and Alexander of Tralles quote Soranus and Leonidas, both of whom are younger than our Rufus. However it is hard to maintain that these two writers Soranus and Leonidas read or used Rufus' account because of the nature of the second hand sources but one can say that, although both Aetius and Paul used Rufus' works, they were silent about his work Medical Questions in which the account of that disease appears.

Though it is hard to explain those Classical writers' silence of Rufus' account it is of some interest to list what they thought of guinea worm or as they all called it, dracontia.

According to Paul, Soranus believes that it is not in principle an animal but a composition of some nervous nature *νευρίου τινὸς αὐτῆος* because of its seeming motion (I believe that he means that it is associated with nerves for its partaking

Gärtner's reading of Rufus' text suggests. I would like to thank Luc Deitz and Ruth Webb of the Warburg Institute for their help in reading these Greek passages.

⁸³ Galen, VIII, p. 393; XIV, p.790 (Introductio sive medicus); XIX, p. 449. Pollux, Onomasticon IV, 205. Aetius XIV, 86, p.69. Paul IV, 58. Actuarius, Method. Med. IV,16; VI,8.

in the motion).⁸⁴ Galen's account is rather more detailed. He in his work De Locis affectis defines it as nervous in nature and worm-like in colour and thickness.⁸⁵ In the pseudo-Galenic work Medical definitions he describes dracontia as ulcers which involve the carrying of a nerve into them from a nearby part of the body.⁸⁶

Pollux defines drakontion as some destroyed nerve like thing which falls out from the ulcers at the legs and thighs.⁸⁷ (Pollux identifies the worms with nerves, and differentiates them from nerves by calling them destroyed nerves. He also believes that they emerge from ulcers).

On the other hand Classical authors have given again other various designations for the worms. In the Introductio sive medicus pseudo-Galen designates them as similar to varicose veins.⁸⁸ Ullmann believes that the first designation much influenced the Arabic writers that made them ultimately name the worm a vein.⁸⁹ Finally we have Leonidas, Paul of Aegina

⁸⁴ Paul of Aegina, IV, 58 (p. 387); Adams, op.cit., vol. II, p. 150. Qusta ibn Luqa says that neither Hippocrates nor Galen has mentioned it. He, on the other hand is going to mention what Soranus and Leonidas have said about it. Cf. Gerrit Bos, The treatise of Qustā Ibn Luqā on the regimen during the pilgrimage to Mecca, thesis, Amsterdam, 1989, p. 47 (Arabic text).

⁸⁵ VIII, p. 393.

⁸⁶ XIX, p. 449.

⁸⁷ Pollux, Onomasticon IV, 205. ar-Razi attributes to the author of the book of signs the belief that it happens from the destruction of the nerve. Cf. ar-Razi, XI, p. 290.

⁸⁸ XIV, p.790.

⁸⁹ Cf. Ullmann, Islamic medicine, p. 82. I do not agree with Ullmann for if they were influenced by Galen they would have called it دراك. While Qustā ibn Luqā, ar-Rāzī,

and Actuarius who identify the worm as an animal. Actuarius, on the other hand believes that they are generated in the ulcers.⁹⁰

Another interesting aspect of Rufus' account is the nationality of (his) patient (or patients) i.e. Arab. The significance of the nationality comes in its appearance in a medical text which makes the reader speculate about the purpose of the presence of those Arabs in Egypt. This raises the assumption that they were in Egypt for trade or even for treatment. One cannot, on the other hand, rule out the possibility of them being residents in Egypt especially when we learn that they were three, a man, his female maid and another woman, all of whom were suffering from the same disease.

However how much one can be satisfied by attributing the disease to the Arabs, there is still a problem of identifying

Ibn Sīnā, Ibn Zuhr, al-Majūsī and Abu al-Qāsīm agree on labelling the worms veins they disagree when it comes to the details of their description. Ibn Sina believes that they are veins move like animals (worms) which made some people believe that they are animals while some maintained that it is a branch from the tissue of the nerve. Ibn Zuhr maintains that they emerge like nerves. Qusṭā believes that it is an animal like all animals produced in the stomach and intestines. al-Majusi thinks that they move like worms and they are like veins.

Cf. ar-Rāzī, XI, pp.292-293; al-Majūsī, I, p.314, II, p. 209; ibn Zuhr, p. 364; Ibn Sina IV, p.71; Abu al-Qāsīm, p. 601; Qusṭā Ibn luqā, op. cit., p.46; Adams, op. cit., vol.II, pp. 151-153.

⁹⁰ For Leonidas and Paul see Paul, IV, 58, p. 387; Adams, op. cit., II, pp. 150-151. For Actuarius see Method.Med. IV, 16, p. 173; VI, 8, p. 294.

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what is meant by the land of the Arabs.⁹¹ But before localizing the Arab-land one has to look for other countries where the disease was prevalent or simply existent both in Rufus' time and in antiquity in general.

Adamson, in his article "Dracontiasis in Antiquity", gives a scheme of how and where the disease started from and expanded to. He believes that it started in East Africa, then passed to Egypt and from Egypt to Mesopotamia and later to India.⁹² Unfortunately Adamson does not pursue the question about the continual presence of the disease after its spread to another land, so one cannot be sure whether the mentioned disease, which was existent, according to him, in Egypt in the pharaonic times and afterwards, spread to Mesopotamia stopped existing in Egypt or not. Rufus' account can be both enlightening and misleading as well, for he maintains the presence of the disease among the Arabs and is silent about its existence among the Egyptians. This may lead the reader to assume that Egypt was clear from that particular disease. According to Rufus the disease was common among the Arabs and those who travelled among them. According to Agatharchides it was common in the vicinity of the red sea (west or east coast of it ? north or south ? Africa or Asia?). Galen says that he heard that it was among the Arabs (probably he is influenced by Rufus). Aetius of Amida claims that the disease is found

⁹¹ Gärtner proclaims his inability to locate such a land assuming that it can be anywhere between Mesopotamia and Syria or what is known in modern times as Arabia. Gärtner, op.cit., p. 100.

⁹² Adamson, " Dracontiasis in Antiquity"; Medical History 32, 1988, pp. 204-209.

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in Aethiopia and India while Paul of Aegina says that it is in upper Egypt and India.⁹³ Again Actuarius mentions upper Egypt as its homeland.

It seems then possible that Egypt can be one of the infected countries with that disease in Rufus' time. Yet that does not mean that the disease could not be Arabic. For the evidence from the third century B.C. testifies that the eastern desert of Egypt was called Arabia and its inhabitants were Arabs.⁹⁴ In other words the disease could be very well among the Egyptians as well as among the Arabs. Whether those Arabs were the inhabitants of what we know nowadays as modern Egypt or what we also know as Arabia does not challenge the probability of the presence of the disease among the Arabs. For adding to Rufus' account we have Agatharchides' text. Despite the ambiguity of the term Red Sea, the text gives us the chance to believe that Arabia can be the country meant.

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It is interesting to add that there is evidence that the disease was prevalent in Pre-Islamic Arabia. Arabic authors, say that the disease was present in Arabia in their own times.

⁹³ Claus Vogel in his article "On the Guinea-Worm disease in Indian medicine" in the Adyar library bulletin 25, 1961, pp. 55-68, defends India. He says that the Indian sources which represent the Indian knowledge of medicine up to the eighth century are silent about the disease, while the Greek authors are known for their confusing India with Aethiopia. He concludes that the disease was first introduced to India by the Arabs starting from the eighth century. I do not agree with Vogel on his assumption for it is far from reality and it is built on argumentum ex silentio.

⁹⁴ Abdel-Ghany, Mohamed E., "The Arabs in Ptolemaic and Roman Egypt through Papyri and inscriptions" in Egitto E storia Antica Dall'Ellenismo All' Età Araba, Bianco di un Confronto, a cura di Lucia Criscuolo Giovanni Geraci, Bologna, 1989, pp. 233-242.

Some of them actually happened to treat patients from that disease in various parts of the Arab peninsula.⁹⁵

Cause of the disease

For this, one has to go back to our first point, the effect of water on health. According to Rufus, the generation of this particular disease is due to water. Rufus gives the impression that there could be some other reasons but water is the main one. This realization of the role of water in the generation of this disease has not been shared by other Classical authors until the author of the book of the Abbreviations, mentioned by ar-Rāzī, ascribed the disease to water. Ibn Sīnā offers the same explanation. The rest of the authors are either silent or attribute its cause to humours, fatigue, food, and putrefaction.

The importance of Rufus' explanation is double. First it is not his explanation. It is either that of the patients whom he asked about the disease or the native Egyptians who gave him this answer. Second, it is the first appearance of this explanation in medical history an explanation which was later confirmed as valid.

One word has to be added about its treatment. Rufus is silent

⁹⁵ Qusṭā ibn Luqā thinks that the disease can be found in the cities of al-Medina and Mecca as well as in Samara and in the mild aired hot countries. Cf. ar-Razī, Xi, p. 294. Ibn Sīnā says it is in al-Medina, Chorasan, Egypt and some other countries. Ibn Zuhr says it is mostly in Sudan. al-Majūsī states that it is in hot countries such as India, Egypt and Ethiopia. Abu al-Qāsīm says that it is in hot countries such as al-Hejāz and Arab countries and hot dry infertile countries.

about its treatment either because it was beyond the scope of his work or perhaps because he did not treat it. Galen clearly proclaims his ignorance of it and says that what he knows he has picked from hearsay.⁹⁶ Agatharchides also did not treat it for he was not a physician. Neither Aetius of Amida nor Paul of Aegina nor Pollux nor Actuarius gives us the impression that they actually saw the disease. The only two Classical authors who actually encountered and treated the disease were Soranus and Leonidas, both of whom are younger than Rufus.

Where could these two authorities (Soranus and Leonidas) have treated the disease? We know that both of them were in Egypt, but this does not legitimize the assumption that they treated Egyptians, for we have already seen Rufus encountering Arab patients in Egypt.

Arthritis

In two incidents Rufus specifically links the generation of the disease as well as its treatment with certain fountains. The water of the fountain Arethusa in Chalkis generates foot pain to the animals that drink it⁹⁷ while the

⁹⁶ VIII, p. 393.

⁹⁷ Cf. Oribasius, Coll. Med. IV, 3, p. 335. See also Gärtner, *op.cit.*, p. 44, 64. In Oribasius it is pain in feet πoδaλγiα, while in Medical Questions it is podagra. Daremberg has noticed that there are many fountains with the name Arethusa but the only writer who attributes to this fountain a bad quality is Rufus. Cf. Daremberg, Oeuvres d' Oribase, vol. I, p. 632.

water of Cnidus has a therapeutical effect on the gouty.⁹⁸

In blaming water for the generation of gout (arthritis) Rufus again sides with Hippocrates.⁹⁹

Conclusion

We have already seen Rufus' interest in explaining the occurrence of three specific diseases with water. In his explanation of both lithiasis and arthritis Rufus seems to be Hippocratic while his explanation of guinea worm proves his originality.

The third cause of illness this chapter studies is external factors.

III External Factors

Rufus' surviving writings reflect a variety in terms of causes of disease. We have already seen the effect of both air and water on health. Air and water appear, as both external and internal factors, capable of generating disease.

In this section I shall study the role of external factors in developing illness. I mean here by external factors the effects of weather conditions such as sun and dust on the eyes; the bites of rabid animals; and what one can call blows and falls. The value of assigning a separate section for the study of external factors is in its potentiality to examine how consistent Rufus was in his explanation of illness, and to

⁹⁸ According to Daremberg Pliny, Vitruvius and Strabo take the same attitude towards that water. Ibid.

⁹⁹ Cf. A.W.P., IX.

evaluate the position of humours in his disease explanation. ^{a great deal attend}
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One always needs to emphasize that Rufus' awareness of the causes of illness is not always clearly expressed. Yet it is our job to analyze the words and read between the lines to bring out his own ideas.

Generally speaking, the Hippocratics acknowledged remarkably the effect of external factors on health. In other words Rufus is not original when it comes to the basic principle.¹⁰⁰ Yet his efforts should not be undermined in that respect.

The first external factor we shall consider is the bites of mad dogs and its consequence, hydrophobia.

Rabies

The ancient civilizations of Egypt, Mesopotamia, Persia, India, and China all knew the bites of mad dogs. There is also some evidence that they linked it with hydrophobia and that they treated it as well.¹⁰¹ Ancient Greece also knew mad dogs. Homer, Aeschylus, Sophocles, Euripides, Aristophanes, Xenophon and Theocritus mentioned the rage of dogs and wolves, each in his particular way and context.¹⁰² Yet it is

¹⁰⁰ Lonie believes that the distinction between external and internal causes of illness is old. It goes back beyond the Hippocratics to Alcmaeon. For further information on the subject cf. Lonie, the Hippocratic treatises, pp. 139-140; 328-330.

¹⁰¹ See Théodoridés, Jean, Histoire de la rage, Paris; New York; Marson, 1986, pp.17-22. In India it was linked with hydrophobia.

¹⁰² Baumann, "Über die Hundswut im Altertum" in Janus, 1928, p. 138; Théodoridés, op. cit., pp. 23-4.

different with the medical works. It is disputable whether the Hippocratics knew the disease in humans.¹⁰³ Aristotle, on the other hand, expressed his views on the possibility of the occurrence of rabies in both humans and animals in a very difficult passage where he maintained that rabies, procured by bites of rabid dogs, attacked animals and not humans.¹⁰⁴ Yet he was the first to signal rabies in camels and in horses.¹⁰⁵ According to Caelius Aurelianus, Asclepiades was not the first to link the bites of rabid dogs with hydrophobia. The Alexandrian physicians made that link, and some of them wrote specifically on the subject.¹⁰⁶ Later Greek and Roman physicians carried on the interest in such disorders. Some of the names are Celsus, Pliny, Galen, Caelius Aurelianus and many others. Also the Arabs shared with their predecessors a great interest in these disorders which appear, for instance, in the accounts of ibn Sīnā, Abu al-Qasim al-Zahrawī, ibn Zuhr and others.¹⁰⁷

All these figures were engaged in a pursuit of a

¹⁰³ Théodoridés, op. cit., p. 25.

¹⁰⁴ Scholars are in disagreement on its interpretation. While Baumann takes it as a proof of the difference of the disease form in humans and in animals (Baumann, op. cit., p. 139), Théodoridés renders P. Louis' opinion that the bite of a rabid animal is not always dangerous to the human especially if it is made through clothes. Théodoridés, op. cit., p. 27.

¹⁰⁵ Théodoridés, op. cit., p. 27.

¹⁰⁶ Baumann, op. cit., pp. 143-4.

¹⁰⁷ For a display of the ideas of these ancient authorities see Théodoridés, op. cit., pp. 47-52. It is also worth noting that there is a work in Syriac by Ayyub ar-Ruhawi on rabies. Yet according to Degen it is not yet published. Cf. Rainer Degen, "Ein corpus Medicorum Syriacorum" in Medizinhistorisches Journal 7, 1972, f. n. 40, p.120.

causation of the disease in animals as well as in human beings, besides the ways rabies takes to be transmitted from animals to humans. It was believed that the heat and dryness of the surrounding air caused rabies in animals.¹⁰⁸ As for humans, it was believed that the mad animal secreted a poison responsible for rabies.¹⁰⁹ Yet there are various ways for the

¹⁰⁸ This opinion appears in the apocryphal letters of Hippocrates. Cf. Théodoridés, op. cit., p. 28.

Poseidonius believes that the cause of rabies in dogs is the heat and dryness of the air during summer which leads to a great heat and dryness of the body in the naturally warm and dry dogs. He adds that a great dryness of the body is the reason of the disease in animals as well as in human beings. Baumann, op. cit., pp. 178-9. Cf. also Théodoridés, op. cit., p. 41.

Aetius renders almost the same etiology as he attributes it to the hot and dry constitution of the animal which engenders the disease when it is over dried by the summer heat. Théodoridés, op. cit., p. 44.

Ps. Dioscorides attributes it to an excessive heat and cold. Baumann, op. cit., p. 170.

Apsyrtos, a vet from the fourth century, attributes it in horses to an excessive heat or to food (vetch). Théodoridés, op. cit., p. 43.

Hierocles maintains that it is due to an excessive blood in the meninges, or to the presence of bile in the blood, or to the bad quality of drinking water. Théodoridés, op. cit., p. 43.

Pseudo-Alexander of Aphrodisias states that the disease in dogs is a species of fever. Adams, The seven books of Paulus of Aegineta translated from the Greek with a commentary, London, vol.II, p. 167.

Paul of Aegina includes Lycus' view that rabies arises due to excessive heat or cold. Ibid., p. 163.

Théodoridés says that ibn Sina adds to the etiology of the disease which is built on the heat and cold, the role of the ingestion of putrefied meat and corrupt water which leads to a putrid transformation of humours and especially of bile. Théodoridés, op. cit., p.48.

Abu al-Qāsim ascribes rabies of dogs to their dry and bilious temperament which favours the corruption of humours. *ibid*, p. 49.

¹⁰⁹ In Ancient Egypt there was a recognition of the poisonous effect of the saliva of the rabid dog. Cf. Théodoridés, op. cit., p. 18. It is interesting to note that Galen attributes to the corruption of dog's humours the generation of this toxic saliva. *Ibid.*, p. 30.

disease transmission from animals to humans. These are bites of rabid dogs- or some other animals such as wolves ¹¹⁰- or inhaling the vapours of a rabid animal ¹¹¹, or licking something the animal touched, or scratches from a rabid animal, or eating the flesh of an animal bitten by a rabid animal.¹¹² Yet there is also an indication of the absence of a manifest cause.¹¹³

Those authorities disagreed on the time that hydrophobia takes to appear. Though it does not appear before 40 days it sometimes takes 6 months or even seven years to appear.¹¹⁴

Celsus recommends the use of cupping glass for extracting the poison. *Ibid.*, p. 35. Pseudo-Dioscorides as well as Philumenos recognized it as a poison. *Ibid.*, p. 29; p. 34 respectively.

¹¹⁰ Caelius Aurelianus indicates that it occurs mostly due to a bite of a dog, but also of a wolf, a bear, a leopard, a horse or an ass. Baumann, *op. cit.*, p. 174. Theodore Priscianus attributes it to bites of serpents. Théodoridés, *op. cit.*, p. 42. Ibn Sina adds foxes and martens. *Ibid.*, p. 49. According to a fragment of an anonymous Greek author the disease arises either from the bite of a dog or from humours engendered in the body. Adams, *op. cit.*, p. 167.

¹¹¹ Aretaeus of Cappadocia, according to Théodoridés, maintains that the air, exhaled by the rabid dog, is enough without the bite to transfer the disease into humans. Théodoridés, *op. cit.*, p. 31. Caelius Aurelianus gives the same opinion. Adams, *op. cit.*, p. 166.

¹¹² Caelius Aurelianus expresses such views. Cf. Baumann, *op. cit.*, p. 174; Adams, *op. cit.*, p. 166. Galen says that a contact with the skin of a rabid dog brings the disease about. Baumann, *op. cit.*, p. 177.

¹¹³ Adams attributes this view to Caelius Aurelianus. As a methodist, Caelius Aurelianus says that a spontaneous *strictio*, without a notorious cause, leads to the disease. Adams, *op. cit.*, p. 166; Baumann, *op. cit.*, p. 174.

¹¹⁴ Pseudo-Dioscorides and Philumenos think that it takes from 40 days to one or even seven years to appear. Baumann, *op. cit.*, p.170; Théodoridés, *op. cit.*, p. 34. Poseidonius says it takes 40 days or longer. Baumann, *op. cit.*, p. 179.

Two more issues were matters of concern to the ancients; the novelty of the disease and its classification. Both Plutarch and Caelius Aurelianus handled the idea of the novelty of the disease from different perspectives. While Plutarch, taking the stand of moral philosophy, argues for its novelty, Caelius Aurelianus tackled the subject to reject its novelty reflecting the Methodists' point of view.¹¹⁵

Its classification means an answer to this question: is hydrophobia a somatic or a psychic disease? is it an illness of the soul or of the body? In that respect Baumann thinks that in the Hippocratic time it was considered as one of the soul or the mind.¹¹⁶ He asserts further that some other ancient writers considered it a kind of mania, melancholy or phrenitis.¹¹⁷

It is important to indicate that they were also concerned with its therapy. Invocation of the saints ¹¹⁸, expulsion of

Columella says it takes 40 days. Théodoridés, op. cit., p. 36. Galen says that it takes from two to four or more months or even a year. Hans Gärtner, Die Fragen des Arztes an den Kranken [von] Rufus von Ephesos, Berlin, 1962 (C.M.G.Suppl.4), p. 86. Caelius Aurelianus says that it takes from 40 days to one year. Théodoridés, op. cit., p. 37. According to Caelius Aurelianus Demetrios of Apameia says that hydrophobia can last for two years. Baumann, op. cit., p. 143.

¹¹⁵ For an exposition of a comparison between the two accounts see J. Pigeaud, La Maladie de l'Ame, Paris, 1981, pp. 112-120.

¹¹⁶ Baumann, op. cit., p. 140 Caelius considers it as a disease of the body. *ibid.*, p. 174. Yet he treats the patient as both physically and mentally disordered. *Ibid.*, p. 177.

¹¹⁷ *Ibid.*, p. 140. See *infra*.

¹¹⁸ In Coptic Egypt. Cf. Théodoridés, op. cit., p. 18.

demons ¹¹⁹, and some magic ingredients were included in therapy.¹²⁰ Therapy was not simply curative but also preventive.¹²¹

Let us investigate Rufus' understanding of the disease. While the lists of Ibn an-Nadīm and Ibn abi Uṣaibi'a include, among the several titles of Rufus' works, the following title : " On the disease that is accompanied by hydrophobia " Suidas' lexicon does not include such a title.¹²² Despite its mention in the Arabic biographers' lists we, unfortunately, do not have the work intact but only in fragments both Greek and Arabic. The Greek fragments appear in the encyclopedias of Aetius of Amida and of Paul of Aegina.¹²³ The first fragment

¹¹⁹ In many ancient civilization demons were supposed to be the cause and their expulsion from the body was inevitable to procure recovery. Ibid., p.19.

¹²⁰ Pliny, Columella and Poseidonius all offer some magic ingredients. Baumann, op. cit., pp. 142-3; pp. 148-150, p. 180 respectively.

¹²¹ In India there is an evidence of the interest in preventive therapy. Théodoridés, op. cit., p. 21. Andromachus prescribes a theriac for prevention. Ibid, p. 31. Pliny gives preventive medicine. Baumann, op. cit., pp. 142-3. Philumenos also prescribes preventive remedy. Théodoridés, op. cit., p.34. Ibn Sina gives preventive and curative remedies. Ibid., p. 48. According to Adams, Galen prescribed preventive and curative treatment for the disease but he did not give any description of the disease itself. Adams, op. cit., p. 167.

¹²² For the differences of translating the Arabic title of this work into Latin and modern languages see the first chapter. Also for Suidas' list of Rufus' works see the first chapter.

¹²³ Ruelle says that Daremberg maintains Rufus' authorship of fragment 76 while he himself does not accept all of it as authentic.

As for frg. 118, which is extracted from Paul's work, Ruelle keeps silent and refers the reader to Oribasius' relevant text, and fragment 76. In frg. 118, Rufus' name is explicitly linked with a comparison between melancholy and hydrophobia. I think this is the only part which one can

carries the title " On those who are bitten by mad dogs or hydrophobiacs ". It is attributed, besides Rufus, to Posidonius and Galen.¹²⁴ The second has the title " On those who are bitten by mad dogs and the disorder hydrophobia". There is an Arabic fragment which appears in ar-Rāzī's al-Hāwī and it has no title.¹²⁵ Ibn al-Mubarak attributes to Rufus two fragments which discuss the treatment of the bites of mad dogs as well as of humans.¹²⁶ Yet the question whether Rufus devoted a separate work to discuss this disorder or included it as a part of a bigger work, presumably To the laymen,

confidently accept as authentic. The following part which deals with the method of recognizing whether the biting dog was mad or not is credited to Oribasius by Paul. The same part appears in Aetius' fragment without any acknowledgement of his source. As we accept Ruelle-Daremborg's view it is possible that either of these authorities: Posidonius or Rufus or Galen or even Oribasius is the source. In other words it is difficult to attribute it wholly to Rufus.

The part which discusses therapy is common to the accounts of Oribasius, Aetius and Paul. There is a correspondence between Aetius' and Paul's sections which suggests that either of those three authors to whom Aetius' chapter is attributed is Paul's source. In brief Rufus could only be partly a source for Aetius' and Paul's therapies of hydrophobia.

¹²⁴ Ruelle adds Galen's name to the title. He explains that the name is included in the table of chapters in the heading of book VI of Aetius' edition. R.-D., p. 372.

¹²⁵ ar-Rāzī, XIX, p. 429. There is a Latin fragment of ar-Rāzī's where Rufus and Galen are cited for prescribing some treatment for the disease. This fragment is included in Ruelle-Daremborg's edition of Rufus' works. Frg. 382. Gärtner, op. cit., p. 89.

¹²⁶ Ibn al-Mubārāk, al-Munqidh min al-Halak fī daf' madār as-smā'im al-muhlikah, Ms. Chester Beatty 3795. This manuscript is not complete. Chapters twenty two to thirty three of the third Maqala are missing. Hence there is no correct pagination. Rufus is quoted in that incomplete section twice. The first is in fol. 142 a 3f (?) where he prescribes some treatment for the wounds of rabid dogs. The second is in fol. 143 b 1f (?) where he prescribes some treatment for human bites. It is worth adding that Ullmann in his book Die Medizin im Islam did not mention those two quotations.

remains difficult. Moreover Rufus deals with the two disorders in his well-known work Medical Questions where his clinical expertise adds a new dimension to the subject.¹²⁷

Our job now is to extract Rufus' ideas of the cause of illness, how it was supposedly transferred, its symptoms, how it could be recognized and finally what the best treatment was.

Rufus recognizes that bites of rabid dogs create wounds which if not treated accordingly lead to spasm, delirium, hydrophobia and eventually to death.¹²⁸ Yet what causes hydrophobia or the fear of water is fairly controversial in Rufus' fragments. Rufus gives the patients' own explanation of such a fear. They think that their nature has changed from dryness to humidity and hence water is fatal to them.¹²⁹ Yet he himself has a different view. He blames black bile and its domination in the body for the appearance of hydrophobia.¹³⁰

¹²⁷ Gärtner, op. cit., p. 40, 47-48.

¹²⁸ Ibid., p. 40, 46.

¹²⁹ ar-Rāzī, al-Hāwī, XIX, p. 429. Paul of Aegina attributes to "some" the view that fear of water is due to an inordinate dryness. Adams, op. cit., p. 163.

¹³⁰ ar-Rāzī, ibid. Anonymus Parisinus says that the ancient Greek physicians did not know the disease. Rabies could be due, besides the bites of raging dogs, to a dyscrasis of the bodily fluids, especially an excess of black bile. The result in both cases is the dryness of the body particularly of pneuma and of the stomach. Baumann, op. cit., p. 145; Théodoridés, op. cit., p. 32.

Artemidorus of Sidon, the Erasistratean, mentions, among the symptoms, vomiting of black bile. Baumann, op. cit., p.144.

Galen attributes the toxic saliva to a corruption of the humours of the dog. Théodoridés, op. cit., p. 30; Baumann, op. cit., p. 177.

Caelius Aurelianus mentions vomiting of black bile as one of the symptoms. Ibid., p. 176.

His therapy supports this opinion as it includes evacuating black bile. He also adds that the patient's safety from hydrophobia is obtained if he urinates blood.¹³¹

In fragment no. 118, Rufus defines hydrophobia, in what concerns the patients, as a kind of melancholy.¹³² Yet, he acknowledges the cause as poison imitating black bile, for the sufferer from rabies fear water just as the melancholic fear various things.¹³³ Paul adds that this explains why they see in water an image of a dog biting them.¹³⁴ In other words, the characteristic qualities of black bile are responsible for two symptoms, the fear of water and the hallucinations.

Ibn al-Jazzār recommends the evacuation of black bile. Théodoridés, *op. cit.*, p. 50.

Also in a fifteenth century veterinary work the disease is always considered as a humoral disorder, due to the excess of black bile. *Ibid.*, p. 52.

¹³¹ ar-Rāzī, *ibid.* For the correspondence between black bile and blood see the section on humours. One can also argue that Rufus means by the safety obtained by evacuating blood that poison is being distributed in the blood and hence the evacuation of blood with urine releases the body from it.

¹³² See the section on melancholy in Chapter Three.

¹³³ Gärtner interprets this sentence as that the poison corresponds with black bile. Gärtner, *op. cit.*, p. 89. Adams renders it thus : the poison putting on the nature of that humour... Adams, *op. cit.*, p. 163. Baumann says that the black bile obtained from the poison an extraordinary quality. Baumann, *op. cit.*, p. 171. Baumann's translation is incorrect.

¹³⁴ The last symptom reminds the reader with fragment 70 where Rufus talks about the hallucinations of the melancholic patients. This symptom occurs in the accounts of many authors. Ibn Sina mentions among the symptoms visual hallucinations (images of small dogs). Théodoridés, *op. cit.*, p. 49. Magnos of Ephesos mentions Hallucinations (seeing small flying animals). Baumann, *op. cit.*, p. 169.

The problem is that the Arabic fragment represents Rufus acknowledging the reason as black bile while the second attributes it to the poison that imitates black bile. It is probable that the Arabic translator of the Greek text or ar-Razi, the excerptor, preferred to simplify the text by mentioning just black bile instead of poison that imitates black bile. After all, the hallucination and the fear of water were linked in ancient and Arabic medicine with black bile.

It is interesting to note the possible ways of the disease transmission and the possible number of the survivals. In Medical Questions Rufus mentions a case of a man who was bitten by a rabid dog and who died not much later.¹³⁵ His wife who was three months pregnant, and who slept with him when he had the wound, escaped her husband's fate when Rufus ordered an abortion.¹³⁶ One has to notice that the man was suffering from rabies, while his wife was suffering from hydrophobia. It seems that Rufus did not treat the man but gave his order to treat the wife. Rufus indicates that the man did not listen to the doctors' advice or that of his companions concerning his wound. The possible way by which the disease was transmitted from the man to his wife, was

¹³⁵ In fragment no.118, Paul says that he has not seen any one survived the bite of a rabid dog. Yet he saw one or two who survived the bite which was from a bitten man. This expression was common among Greek doctors. Scribonius Largus and Pseudo-Dioscorides use it. Cf. Baumann, op. cit., pp.168; 170 respectively.

¹³⁶ Gärtner says that the art and the way of describing the case history is characteristic of Rufus. Only the most important facts were communicated. Marginally the reader learns of the rescue of the wife without any word of pride. It corresponds with the story of the Samian. Gärtner, op. cit., p. 93.

peculiar. It was transmitted by sexual intercourse.¹³⁷

Our present question is Rufus' method of recognizing both the bite of the rabid dog and consequently hydrophobia. In Medical Questions Rufus emphasizes the importance of asking questions in order to recognize the disorder. The doctor has to ask about whether the dog is rabid or not, for, as he shows later, it makes a difference in therapy.¹³⁸ In other words he depends on the patient (or on those who surround him) for answering this question.¹³⁹ Asking the patient for such information makes the assumption that he (the patient) would recognize the rabid dog. That would mean two things, first that the biting dog was either owned by the bitten man or at least known to him. Second that there are some physical or behavioural characteristics of rabid dogs. Rufus, apud ar-Razi, mentions some of these characteristics. He says that the dog's ears are always down. He never rests but always runs.¹⁴⁰

¹³⁷ Gärtner says that this way of transmission is unparalleled. Gärtner, op. cit., p. 92. For the various ways of disease transmission see supra.

¹³⁸ Gärtner, op. cit., p. 40, 46.

¹³⁹ It is worth noting that the cases Rufus brings do not reflect the importance of asking questions in that particular disease. See chapter four.

¹⁴⁰ ar-Rāzī, XIX, p. 429. Greek fragments do not bring any mention of any physical characteristics of rabid dogs. Paul describes mad dogs as follows : they shun drink and food, for they are thirsty but do not drink, and for the most part they pant, hang their ears, and emit much frothy saliva. Generally they utter no sounds, and are as it were delirious, so that they do not recognize persons with whom they are familiar. Adams' translation. Adams, op. cit., p. 163. Posidonius brings some mention of some physical characteristics of the raging dogs. Baumann, op. cit., p.179. Oribasius and Aetius give similar descriptions of rabid dogs. Théodoridés, op. cit., p.

Yet in fragments nos.76 and 118 Rufus mentions a way by which the physician can recognize whether the dog is rabid or not. He prepares a cataplasm, applies it to the wound, and then gives it to a hen or cock to eat. Out of satiety it will not touch it but later on at the pressure of hunger it will. If it survives that means that the dog is not rabid; and if the opposite occurs, it then means that the dog is rabid.¹⁴¹ This passage corresponds with Medical Questions' text where we have a wound and where the therapy depends upon the knowledge of its cause. Yet the two passages differ on a very specific point that the first depends on the patient to provide some answer while the latter depends on the doctor to investigate the state of the animal. One can reconcile the two texts by saying that Rufus in the first text assumes that the patient knows the answer while in the second the patient does not know whether the dog is rabid or not and the doctor has to find out for himself.

A further support to both methods can be gained from a passage elsewhere in his work Medical Questions. Rufus talks about the value of asking about the bites and scratches of animals so that one can treat easily before the symptoms appear. He carries on to allude to the importance of symptoms. Yet in the case of the biting dog one cannot wait or depend on the

42, 44. Also Pseudo-Dioscorides mentions it. Baumann, op. cit., p. 170.

¹⁴¹ I am using this section with reservation for the following reasons. While the use of the cataplasm appears in Aetius' account under three names, it appears in Oribasius' without any indication of any authority. In Paul's account there is no indication of Rufus' lemma.

symptoms for it means that the disease has arrived.¹⁴²

The interesting thing about his cataplasm that he uses birds as animal test and he uses them as long as it takes to secure the safety of his patients.

The time it takes to turn to hydrophobia varies from 40 days to 6 or even 7 months.¹⁴³

As for therapy, Rufus, as has been already indicated, differentiates between the simple wound of a non rabid biting dog and the rabid one.¹⁴⁴ The first is treated by a sponge moistened with vinegar ¹⁴⁵ while the latter, if it is small, with cautery, stinging medicaments and cutting of the wound. The drink of some herbs as well as river crabs is useful while purgation with hellebore in the middle of the course of treatment is of great help.¹⁴⁶ ar-Razi ascribes a more detailed treatment for hydrophobia to Rufus. His therapy constitutes of bathing, lukewarm sitzbaths, humectating foods, unguents, mixed wine, enemas that evacuate black bile followed by enemas which humectate, and also bleeding.¹⁴⁷ He

¹⁴² Gärtner, op. cit., p. 40, 49.

¹⁴³ R.-D., p. 448, 4. The speaker could be either Paul or Rufus. See supra.

¹⁴⁴ Gärtner, op. cit., p. 40, 46.

¹⁴⁵ Paul records this method in his account of the bites of non-rabid dogs. His therapy of the bites of non-rabid dog is more detailed than Rufus'. Adams, op. cit., p. 168.

¹⁴⁶ Gärtner, op.cit., op. 40, 46.

¹⁴⁷ Adams comments on Caelius Aurelianus' account that it appears from it that some of the ancient authorities believed it an inflammatory affection, and treated it with bleeding. Adams, op. cit., p. 166. He also adds that ar-Razi is a strong advocate of bleeding when the poison is distributed over the system. Ibid, p. 167. Eumelos and Hippocrates the vets agree

recommends making those who have been bitten have some water and also some other potion. Walking quickly, covering or sitting in the sun until the patient sweats is also helpful.¹⁴⁸

Conclusion:

I have shown in this part of this chapter that Rufus, as many of the ancient physicians, paid rabies his attention. Bites of mad dogs were considered the cause of the disease. As some of hydrophobia's symptoms correspond with those of melancholy Rufus considered hydrophobia a kind of melancholy and blamed the poison which obtained the character of black bile for its causation. In that respect Rufus appears to consider hydrophobia a disease of the soul. Eudemus the Methodist, who was living in the first half of the first century A.D., preceded Rufus in believing that hydrophobia and melancholy are related diseases. He maintained that hydrophobia was an acute disease while melancholy was chronic.¹⁴⁹ Rufus' major contribution is in considering sexual intercourse a method of disease transmission which was not mentioned before. His other contribution is his belief that one can ask the patient questions about the biting dog in order to diagnose more accurately and treat better. As for

on the use of bleeding. Théodoridés, op. cit., p. 43. Celsus recommends also bleeding. Baumann, op. cit., p. 146.

¹⁴⁸ Greek fragments nos.76 and 118 give detailed therapies for hydrophobia. However as there are doubts about the possibility of attributing such sections exclusively to Rufus I rather prefer not to include it here.

¹⁴⁹ Wellmann, s.v. Eudemus, PW VI 1, cols. 904-5.

therapy, Rufus appears conventional in his choice of those therapeutic methods to treat such an illness.

The second disease which demonstrates the effect of external factors on the human body is ophthalmology.

Ophthalmology

In this section we are going to discuss the morbid effect of some external factors on the eye. Rufus' anatomical works and pseudo-works reflect, among other things, his interest in the anatomy of the eye. In fact such works are some of our best sources for appreciating the Alexandrians' knowledge of the anatomy of the eye.¹⁵⁰

Moreover, according to Ibn abi Uṣaibi'a, the Arabic biographer, Ḥunain ibn Ishāq attributes to Rufus a work on the

¹⁵⁰ Longrigg argues that the sections on the four tunics of the eye in Rufus' anatomical works where Herophilus is quoted, are undeservedly attributed to Rufus by modern scholars. He claims that they ought to be ascribed to Herophilus. In doing so he sides with Oppermann who says that it was Herophilus who was the first to recognize the four tunics of the eye. Cf. James Longrigg, "Anatomy in Alexandria in the third century B.C." in BJHS, 1988, 21, pp. 464-6. I agree with Longrigg that the sections should not be fully attributed to Rufus for Herophilus' contribution of two specific technical terms for parts of the eye is conspicuous in Rufus' acknowledgement. Yet Longrigg's claim that the fourth tunic has been also discovered by Herophilus is hard to prove from the text. von Staden, on the other hand, refuses to attribute the four-tunic theory to Herophilus from the fact that Herophilus is not explicitly acknowledged as its author. von Staden, Herophilus The art of medicine in early Alexandria, Cambridge, 1989, p. 238. von Staden also believes that Rufus used Demosthenes' work Ophthalmicus without acknowledgement. Cf. von Staden, op. cit., pp. 69, 571.

dissection of the eye falsely attributed to Galen.¹⁵¹ Such an attribution is significant for, firstly, it proves Hunain's knowledge of Rufus' works. Secondly, the ascription of a work to Galen may give an idea of its quality. It undoubtedly acknowledges Rufus' status in anatomy and specifically in what concerns the eye. Yet, bearing in mind Rufus' lamentation on the decline of the human anatomy in Alexandria in his time, it is easy to believe that this assumed work is either a reproduction of some of the Alexandrians' knowledge, or a genuine work of his based on some animal dissection- we have seen him already talking about his own discovery ¹⁵²- or even of his contemporaries whose efforts in the field of onomatological osteology were commented upon by Rufus.¹⁵³

Rufus' knowledge of the eye is not only anatomical but also pathological. We have a section, in his surviving Greek and Arabic fragments, on some eye diseases. The Arabic fragments are taken from ar-Rāzī's al-Hāwī while the Greek fragments appear in Oribasius' and Paul of Aegina's works.¹⁵⁴ Yet, Rufus' surviving section on eye diseases is

¹⁵¹ Ibn abi Usaibi'a, 'Uyūn al-anbā' fī tabaqāt al-atibbā', vol. I, p. 90. Hunain, though thinks that the title is wrong, does not offer another title. Hunain thinks that the book does not belong to Galen and that it should be attributed to Rufus or to someone earlier (or inferior?).

¹⁵² R.-D., p. 159, 186.

¹⁵³ See the first chapter.

¹⁵⁴ ar-Rāzī, al-Hāwī, II, pp. 72, 96, 131, 148, 152, 157, 215, 225, 226, 235. I'd like to add that the fragment of p.235 is not mentioned by any modern scholar. Ibn al-Jazzar and Ibn al-Baiṭār attribute to Rufus the knowledge of the effect of some plants on the eye. Ibn al-Jazzar, K. al-Itimad fi al-adwīa al-mufrada, Frankfurt: Ma'had tarikh al-ūlūm al-ʿarabiyya wa-al-islamiyya, 1985, pp. 110, 1165-166. Ibn al-Baiṭār, K.

relatively small in comparison with his work for instance On the diseases of the kidneys and bladder, or his surviving section on obstetrics and paediatrics, or melancholy.

The Arabic fragments are ten in number. Out of these ten eight are taken from his work To the laymen. The other two are not preceded by any title.¹⁵⁵ It is interesting to note that in one of the fragments the work is described as " his books to the lay" which suggests that this work To the laymen consisted of many treatises or books.¹⁵⁶ It is also notable that this work To the laymen is not included neither in Ibn an-Nadim's list of Rufus' works nor in Ibn abi Usaibia s. Yet Ullmann raises the possibility that it is the same work mentioned by the Arabic biographers with the title The book of the diet of a person who is not attended by a doctor.¹⁵⁷

In fact a different version of that title To the one who cannot find a doctor precedes one of the eight Arabic fragments.¹⁵⁸

On the other hand, Hirschberg attributes to Rufus a work specifically on ophthalmology.¹⁵⁹ Though we do not have either a surviving work or a fragment or even the title itself

al-Jamī li mufradāt al-adwiyah, Cairo, 1874, 4 vols.in 2, vol. I, p. 42; vol. II, p. 3; vol. III, p. 6.
The Greek fragments are nos. 50 and 116 in Ruelle-Daremborg's edition.

¹⁵⁵ Those two fragments discuss the effect of some materia medica as well as snakes on curing some eye ailments.

¹⁵⁶ ar-Rāzī, II, p. 72.

¹⁵⁷ See chapter one.

¹⁵⁸ ar-Rāzī, II, p. 235.

¹⁵⁹ Hirschberg, Geschichte der Augenheilkunde, p. 353.

mentioned in any list of works denoting the existence of a work specifically dealing with ophthalmology, one can confidently assume that this alleged work could be a part of Rufus' big work To the laymen. Besides, the Greek fragments are not marked by any reference to any work in general.

The eye diseases Rufus mentions are ophthalmia, phlegmone, epiphora, stye, blow ¹⁶⁰, blood-spot in the eye, itching, amaurosis (dullness of sight), amblyopia (dim-sight), glaucoma and cataract.¹⁶¹ All these disorders have been mentioned before Rufus in medical literature.¹⁶²

We are going to confine ourselves here with discussing the possible effect of the external factors on the aforementioned disorders. One can detect such an influence in relation with two disorders : ophthalmia, and amblyopia.

¹⁶⁰ I translate the word *خربة* into a blow which indicates that it is not a disease but a cause of disease and undoubtedly an external cause. The fragment is very short (ar-Rāzī, II, p. 152). It starts :

للضربة يكمن وجهه جدا بياضه البيضه مع دهنه ورد يضربه ويكبل عليه

"For a (blow) the white of egg beaten with rose oil and put upon him alleviates his pain very much." One can back this assumption up by citing the title of the third chapter (bab) of ar-Rāzī's book where the mention of a blow is identified with "what hits the eye, wounds and breaks it".

¹⁶¹ I have used Meyerhof's edition of Hunain ibn Ishaq's book The book of the ten treatises on the eye to identify the Arabic ophthalmological terms.

¹⁶² I have surveyed Hirschberg's lists of eye diseases and symptoms in classical authors and Magnus' index to find that ophthalmia, phlegmone, epiphora, stye, amaurosis, amblyopia, itching (it is the translation of the Arabic word *حكة* which is attributed by ar-Rāzī to Rufus), glaucoma and cataract have been all mentioned before and after Rufus. As for blood-spot in the eye, von Staden allows us to assume that it was known to Demosthenes although Liddell-Scott's dictionary gives as the earliest reference a mention by Sextus Empiricus (c. 180 A.D.) Cf. von Staden, op.cit., p. 576. See also Hugo Magnus, Die Augenheilkunde der Alten, Breslau, 1901.

First, ophthalmia.¹⁶³ In ar-Rāzī's fragments there is an Arabic word الرمد which stands for the Greek word "ophthalmia", while in the same fragment phlegmone comes in an Arabic transliterated form.¹⁶⁴ Rufus blames smoke, dust and the sun for bringing about ophthalmia.¹⁶⁵ These are external factors. Yet these external factors, as far as one can see, do not affect any internal factors. Though Rufus does not explain what he means by ophthalmia, he is aware that it is divided into kinds without explaining what they are.¹⁶⁶ Perhaps one can justify his silence by alluding to the fact that the fragments' main concern is therapy. One can also assume that his realization of the different kinds of ophthalmia is based on causal classification. On the other

¹⁶³ ar-Rāzī, II, pp. 72, 96.

¹⁶⁴ Ophthalmia lacked a systematic explanation until Galen clearly defined it followed by Oribasius and pseudo-Alexander of Tralles. Hirschberg, op.cit., p. 68. Magnus, op. cit., p. 503. According to Magnus the differentiation between ophthalmia and phlegmone in Demosthenes, Dioscorides and Celsus is neither clear nor sharp. Magnus, op. cit., p. 267.

¹⁶⁵ Paul of Aegina, in his work, brings what Galen says about ophthalmia. Galen acknowledges the effect of external causes as well as the absence of any obvious one on causing ophthalmia. Adams, op.cit., vol. I, p. 409. Ali ibn al-Abbas divides ophthalmia into three sections, the first one of which has the following causes sun, dust and the like. Ibid., p. 425.

¹⁶⁶ Magnus observes that ophthalmia means in the Hippocratic texts a wide range of eye diseases. He cites four main categories which are ξηρά, υγρά, εσωθεν and λημύθησ. Magnus, op. cit., p. 135-6. For Celsus Lippitudo which stands for ophthalmia means a general humoral genetic type of various eye diseases. Lippitudo is classified into arida, scabra, cum aspritudine and cum caligatione. Ibid., p. 264-5. Demosthenes, according to Aetius, used three terms to denote not narrow and sharp limited forms of diseases but more in a collective sense. These terms are σκληροφθαλμία, ξηροφθαλμία and ψωροφθαλμία. Ibid., p. 265-6.

hand, external factors are not the only causes of the illness.

We have Rufus saying that:

جميع الأشياء المرينة الحادة للاخبرة إلى الرأس كاللحم وكمنه
-محدث الرد-

all pungent, sharp (things) which are driven to the head such as honey and the like cause ophthalmia.

This sentence gives us the evidence that internal factors act upon the eye. Those internal factors are more likely to be kinds of food. The relation between the head and the stomach is invoked elsewhere in Rufus' writings.¹⁶⁷ His exhortation in his therapy to reduce the amount of food may also allude to the effect of an internal factor i. e. food on the eye.

The emphasis in those fragments is on therapy which depends on causation. Rufus prescribes drinking wine when ophthalmia is caused by sun as he believes in its narcotic effect. For he says: "and its treatment is a long sleep".¹⁶⁸

¹⁶⁷ Rufus proves the relation between the head and the stomach with the following evidence. " Repletion of the stomach is very harmful to the head, as one learns that vomiting, sleep and digestion soothe and relieve the hang-over". ar-Rāzī, I, p. 102. In another fragment he gives an anatomical evidence. He says: " There are proofs of the head's association with the stomach: the oesophagus springs from the head; there is a (long) nerve that comes (from the head) to the oesophagus and the stomach; the os of the stomach is linked with diaphragm which is very nervous, and lastly the blow on the head leads to vomit the bile." ar-Rāzī, XV, p. 73. Hippocrates says that if the encephalous is injured there is a vomit of bile. Hippocrates, De. morb., I, 4. Littré, vol. VI. More specifically Rufus says that if milk is not digested sight is harmed because when the stomach is harmed the head is harmed as well. Ibn al-Baiṭār, op.cit., IV, p. 96.

¹⁶⁸ ar-Rāzī, II, p. 72. Hippocrates, Celsus and Galen prescribe drinking wine. Alexander prescribes it when the cause is thick and pituitous blood. Aetius' prescription of it depends on the patient's own temperament. We have also Philagrius and Ibn Sīnā prescribing wine, the latter recommends white wine when the ophthalmia is of a cold nature. Cf. Adams, op.cit., vol. I, p. 423-5.

When it is from smoke and he prescribes washing (fomenting) with sweet water, rest, little of food, confining to shelter and darkness, and anointing the eye-lids with saffron and roses (rose oil).¹⁶⁹ It is also interesting to note that Rufus thinks that this kind of therapy is sufficient to all kinds of ophthalmia. Conspicuous is the absence of both bleeding ¹⁷⁰ and purgatives ¹⁷¹ in this therapy. Perhaps one can explain it with the nature of fragments which leaves the reader in darkness. What concerns us here is the interest of Galen, Alexander of Aphrodisias and all the Arabic authorities in placing ophthalmia among the contagious diseases.¹⁷² My question is whether they have built their judgement on the weather conditions and why Rufus is silent about it.

¹⁶⁹ ar-Rāzī, II, p. 96. Hippocrates prescribes, among other things, almost the same therapy, consisting of little food, rest, darkness. Cf. Hirschberg, op.cit., p. 76. Celsus also recommends in one of the kinds of ophthalmia lying in a bed in a dark room, refrain from talking, and abstinence from food. Celsus, De Medicina with an English translation by W.G. Spencer, vol. II, VI, 6 f.

¹⁷⁰ Hirschberg believes that Hippocrates uses bleeding as the first method of treatment not only for eye disease but also in all disorders of the body. Hirschberg notices that Hippocrates, in what concerns the eye, stands in contrast with the ancient Egyptians who only used local medicine. Hirschberg, op.cit., p.76, also f.n.2. Adams, in his commentary, says that Hippocrates, Celsus, Aetius, Paul, Ibn Massawaih, Ibn Sīnā, 'Alī ibn al-'Abbās and 'Issa ibn Alī recommend bleeding. He also says that "Galen recommends scarification in the chronic defluxion of the eye". vol. I, p. 423-5.

¹⁷¹ Hippocrates recommends purging the head and the bowels for periodical ophthalmia. Galen speaks of the physicians who prescribe looseness by means of cathartics and clysters. Aetius also recommends it. Alī ibn al-'Abbās and 'Issa ibn Alī recommend, among other things, purgatives while al-Zahrawi treats it when it is connected with a bilious cause with purging and other things. Adams, op.cit., vol. I, p. 423-5.

¹⁷² Adams, op.cit., vol. I, p. 425.

Perhaps again the nature of the fragments does not allow us to give Rufus a fair judgement as one cannot say that he ignored the question. Besides the wide distribution of eye disease in the Middle East permits the belief in the contagious character of at least some of eye disease.

The second disorder is amblyopia.¹⁷³ Rufus attributes it to looking at the sun. Yet, while he gives the impression that there are other reasons for it, no other cause is explicitly mentioned.¹⁷⁴ The fragments include two important points : firstly, the signs by which one can recognize the disorder. These predictive signs should lead one first to

¹⁷³ ar-Rāzī, II, pp. 215, 235. The term means for pre-Alexandrians a feebleness of sight regardless of aetiology. Magnus, op. cit., p. 155. Amblyopia was not thoroughly explained till Galen and those who followed him explained it. Hirschberg, op.cit., p. 92.

¹⁷⁴ For Hippocrates amblyopia is caused in over-heated head in which phlegm pours in. When phlegm arrives in the eye blood vessels amblyopia occurs. Hirschberg, op.cit., p. 93. In the H.C. amblyopia is linked with old age, intimated with anaemia or paleness. It is one of the various symptoms of head skin inflammation. It also begins with obstinate periodical joint inflammation. Ibid. Etiologically it is also linked with some internal disorders such as those of abdominal organs especially those of the spleen and the liver, illness of the brain and also with injuries of the forehead. Magnus, op.cit., p. 155.

Aristotle explains amblyopia by the feebleness of the rays of the sight that they are unable to penetrate the surrounding air and so they turn back. This case Aristotle calls . ibid, p. 156.

Demosthenes differentiates between amaurosis and amblyopia. His causes of amblyopia which appear in Paul's account of the disorder are of two types: gradual and sudden. The sudden is a paralysis of the optic nerves or its obstruction by a thick and sticky phlegm. The cause of phlegm's effusion into the optic nerves is various. ibid., p.296.

Celsus identifies age, ophthalmia (lippitudines), and imbecillitas (weakness) as its causes. ibid., p. 295.

Paul of Aegina defines amblyopia as an imperfection of vision without any sensible cause. Cf. Adams, op.cit., vol. I, p. 421.

clean the body, reform the food (another evidence of the relation between the stomach and the head), and take exercises.¹⁷⁵ Evacuation and a change of food can be taken as an awareness of the effect of some internal factors-not necessarily humours- in that disorder. Secondly, there is an interest in therapy. Rufus prescribes a long sleep and drinking wine.¹⁷⁶ In an another fragment dedicated to materia medica and therapy for both amaurosis and amblyopia, Rufus tells us a little more about the therapy.¹⁷⁷ If African rue is ground with honey or wine and the gall-bladder of chicken and pine resin, it is useful. Similarly eating snakes is useful in amblyopia, if their extremities are cut and their stomachs are cleaned, taking care not to split the gall-bladder, and they are thoroughly washed and cooked in water, with a little salt, dill, and wine.¹⁷⁸

Conclusion

Rufus shows himself interested in eye disorders. He is

¹⁷⁵ ar-Rāzī, II, p. 215, 235. We cannot tell whether Paul's treatment is of amaurosis or amblyopia or both. Yet it consists of bleeding, leeches, friction of the extremities, sternutatories, emetics, fomentation and ointments. Adams, op.cit., vol. I, p. 421.

¹⁷⁶ ar-Rāzī, II, p. 215.

¹⁷⁷ ar-Rāzī, II, p. 225. In this fragment Rufus indicates the therapeutic effect of some materia medica in relation with both amaurosis and amblyopia. Ibn al-Jazzār and Ibn al-Baiṭār both attribute to Rufus the recognition of such a therapeutic effect of some materia medica in relation with amaurosis. Ibn al-Jazzār, op.cit., p. 110, 166. (thyme and rue). Ibn al-Baiṭār, op.cit., II, p.3.(savory and thyme).

¹⁷⁸ Galen attributes to the Marsi a similar way of cooking vipers in order to make an antidote useful for elephantiasis. Galen, XI, 143-4.

not the first authority to be interested in that field. While he is inclined to blame external factors for some of them, he does not deny the effect of internal factors on the same disorders. As the emphasis in the surviving fragments is on therapy, one can hardly find any acknowledgment of any causation in most of the eye disorders Rufus mentions. While one finds in phlegmone a reference to the effect of some matter on the eye, when it concerns epiphora, stye, and blood-spot in the eye one finds nothing.¹⁷⁹ In itching Rufus prescribes evacuating the stomach, which may allude to some humoral explanation for the disease.¹⁸⁰ In amaurosis the evidence is clearer, as he prescribes in his treatment gargling with what expels phlegm and warns against some sorts of food which result in vapours ascending to the head. He also prescribes an emetic after food and talks about the benefit of cold and sneezing, all of which allow us to assume that it is due to some humoral causation.¹⁸¹ False vision occurs from cacochymy or from bilious vapours ascending to the head.¹⁸² Glaucoma is explained by the change of the colour of the crystalline liquid because of the dryness.¹⁸³ As for cataract, it is caused by the diffusion and clotting of the

¹⁷⁹ For phlegmone see ar-Razi, II, p. 96.

¹⁸⁰ Ibid., p. 157.

¹⁸¹ Ibid., p. 235.

¹⁸² R.-D., fragment no. 116.

¹⁸³ I have accepted Hirschberg's emendation of Paul's text, which is based on a Galenic text. Hirschberg, *op.cit.*, f.n.1, p. 390.

liquid between the ceratoides ¹⁸⁴ and the crystalline lenses.¹⁸⁵

In general, Rufus seems, when he comes to use those afore-mentioned external factors as explanatory causes for some eye disorders, to be the first surviving writer to do so. Yet the use of external factor is generally Hippocratic, and Rufus' contribution seems to be the application of those particular external factors in what concerns eye diseases. As for therapy he is generally Hippocratic except in what concerns bleeding, which could be explained as a reflection of the nature of the sources and their particular interest in specific points. Besides, Rufus recommends bleeding, among other things, for treating glaucoma and cataract. To rely on the fragments for a broad picture of Rufus' therapy may thus be misleading. Even so, the general absence of other "Hippocratic" writings hardly supports a theory of Rufus as the originator of these therapeutic ideas. ✓

One may conclude this account by a remark on the terms Rufus uses to designate these ophthalmic disorders. While one can notice that Rufus bases his definition of glaucoma and cataract on some anatomical knowledge of the eye construction ¹⁸⁶, on the other hand, one cannot see a similar definition in the surviving Arabic fragments except in the case of the

¹⁸⁴ Hirschberg emends Paul's text to read this $\xi\alpha\gamma\omega\epsilon\iota\delta\omicron\upsilon\varsigma$. His emendation is based on Oribasius' text. Hirschberg, op.cit., f. n.2, p. 390.

¹⁸⁵ R.-D., fragments nos 50 and 116.

¹⁸⁶ Needless to say that it was in the Alexandrian age the first use of anatomy in pathology of the eye. Magnus, op.cit., p. 205-6.

stye where Rufus defines it as a tumour at the fundus of the eyelid.¹⁸⁷ Perhaps one can defend Rufus by saying that it is the nature of the fragments that omit useful information for the benefit of some other information.

The third disease which demonstrates the harmful effect of external factors on the human body is paralysis of the bladder.

Paralysis

Rufus devotes a whole treatise to discuss some of the diseases of the kidneys and bladder.¹⁸⁸ These diseases are eleven in number. It is worth mentioning here that ar-Razi has kept, in Arabic, for us some fragments of this work.¹⁸⁹ The last disease mentioned in Rufus' treatise is paralysis of the bladder. It is the only surviving discussion by Rufus of a paralysed organ of the human body.¹⁹⁰

¹⁸⁷ Hirschberg has noticed that the definition that appears in Paul's account is verbatim Galen's commentary on the second book of Hippocrates' Epidemics. Hirschberg, op.cit., f. n. 8, p. 377-8. One has to say that the two definitions correspond with Rufus'. He has also noticed that Paul's therapy generally corresponds with Galen's. One can add that there is a correspondence between Rufus' therapy and the two accounts in what concerns the use of wax.

¹⁸⁸ For the number of the editions and publications of this treatise see the first chapter.

¹⁸⁹ Sideras comments on ar-Rāzī's fragments of Rufus saying that they are a collection of quotations which means that the value of the textual criticism is reduced. Sideras, Über die Nieren- und Blasenleiden, Berlin, 1977 (C.M.G; Suppl. III, 1), p. 70.

¹⁹⁰ Rufus mentions in his work Medical Questions a hemiplegia of the tongue. Gärtner, op. cit., p. 26,4. There is also a case of paralysis in what is known by its German title

We are concerned here with what Rufus says about its causation.

In an Arabic fragment Rufus attributes its causation to a strong blow on the back i.e. to an external factor.¹⁹¹ The consequence of this blow is, besides paralysis of the bladder, feebleness of the backbone and the thigh(s), the emaciation and the wasting away of the legs.¹⁹² Either constant making of water or its suppression might occur. The Greek text links the occurrence of this disorder to the loss of the power of the hips, loins and also to the numbness of the uterus in women in a different way.¹⁹³ His actual words are :

Παραλύεται δὲ ἄλλοτε μὲν ἰσχυίων ἀκρατῶν ὄντων, ἄλλοτε δὲ ὀσφύος· γυναικὶ δὲ καὶ ὀστέρων νεναρκωμένων· ἀτὰρ οὖν καὶ αὐτῆ μόνῃ παραλύεται.

Despite this link, Rufus, in the Greek text, does not tell how these parts get affected in the first place, and how consequently the bladder is affected. His words reflect keen observation without further explanation.

Adams, in his commentary on Paul of Aegina's seven books, lists the opinions of some Greek, Latin and Arabic

Krankenjournale (case no. XVII). For a discussion of the authenticity of this work see chapter four.

¹⁹¹ ar-Rāzī, al-Hāwī, X, p. 90-1. ar-Razi entitles this quotation with On the dislocation (the loosening) of the bladder. Though it seems hard to identify the word dislocation with paralysis, yet I agree with Sideras on his identification of the Arabic fragment with the Greek text for the similarities between the two texts.

¹⁹² In the Greek text Rufus says that in time the epigastrium, the hips, the loins and the legs become wasted. Cf. Sideras, op. cit., p. 162, 3.

¹⁹³ Sideras, op. cit., pp. 160-162.

authorities on this specific disease. Unfortunately, he does not include Rufus among his authorities even in his exposition of symptoms and therapy.¹⁹⁴ Yet Adams' commentary is useful as it shows us that later authorities share with Rufus his recognition of the effect of external factors on the human body in what concerns this disorder. For instance, we learn that Aretaeus includes among the causes of paralysis wounds and blows.¹⁹⁵ He also designates cutting of a nerve as a cause difficult to cure.¹⁹⁶ Caelius Aurelianus mentions injuries to the brain among the causes of apoplexy and paralysis.¹⁹⁷

Paul of Aegina recognizes the effect of a wound of the spine, a fall and dislocation of a rib as among the causes of paralysis of the bladder.¹⁹⁸

Paul also discusses the curability of some cases, namely the one due to a division of a nerve, or distemper or to a particular humour. He says that the first type is incurable while the second and the third are relieved by "the common remedies applicable to each of them".¹⁹⁹ Paul's recognition of the role of humours is significant. Though before Paul,

¹⁹⁴ It is hard to explain Adams' silence. Yet one can find an answer by alluding to the difficulty of recording all the ancient authorities. Besides perhaps the Arabic fragment which alludes to the causation was not known to him in its Latin garment.

¹⁹⁵ Adams, op. cit., vol. I, p. 398-9.

¹⁹⁶ Aretaeus, III, 7 ff., p. 46.

¹⁹⁷ Adams, op. cit., p. 399.

¹⁹⁸ Ibid., p. 395.

¹⁹⁹ Ibid.

Alexander of Tralles recognized it as well.²⁰⁰ Its significance lies in comparing it with the absence of that link between such an external factor and the humours on the etiological level in Rufus' accounts. Even on the level of symptoms, which are abundantly listed in Rufus' treatise On the diseases of the kidneys and bladder, there is no mention of any evacuation of any humour.

It is important here to give an account of those symptoms. We have already mentioned the symptoms listed in the Arabic fragment. In the Greek text there are more details of what patients suffer especially in making water. In some the urine does not pass unless a catheter is introduced ²⁰¹, while in others it passes without being felt at all. In some it is suddenly secreted without any anticipation, whereas in others it continually drips off. The absence of sensation is very interesting as Rufus continues to list the symptoms. Patients suffer pain in the belly, flanks and in the kidneys when there is retention of urine while no pain is sensed in the bladder. In others these parts lack any sensation.²⁰² In therapy, Rufus recommends the use of particular plants in

²⁰⁰ Alexander mentions fullness of blood. Ibid., p. 399. One needs to emphasize that external factors and humours were not the only causes the ancients recognized as causes of that illness. Theophrastus attributes paralysis to a deficiency or loss of the pneuma, i.e. vital heat. Ibid., p. 397-8.

²⁰¹ Aretaeus forbids the use of the catheter, for fear of occasioning convulsions or gangrene. Adams, op. cit., p. 399. Caelius Aurelianus, on the other hand, recommends the use of a catheter. Ibid., p. 399.

²⁰² Sideras, op. cit., p. 162, 2-4.

clysters for their effect on restoring sensibility.²⁰³ All this shows Rufus' interest in two points: the presence and the absence of both motion (the loss of the power of the hips and the loins ²⁰⁴ - male patients cannot get an erection) ²⁰⁵ and sensibility.²⁰⁶

Rufus' interest in motion and sensibility ²⁰⁷ in opposition to an absence of humours in both causes and symptoms first rules out the impact of blows or the similar of external factors on the humours in developing the illness and suggests that Rufus means that blows in fact affect nerves and muscles. If Rufus recognizes such an effect it will not be surprising for he is, in fact, our source for knowing the Alexandrians' differentiation between the sensory and motionary nerves.²⁰⁸

In therapy Rufus prescribes warm food while warning

²⁰³ Ibid., p. 164, 8.

²⁰⁴ See above.

²⁰⁵ Sideras, op. cit., p. 162, 3.

²⁰⁶ One ought to say that the Arabic fragment does not bring any mention of sensation.

²⁰⁷ It seems that later authorities recognized the same point of the presence and the absence of motion and sensation. Aretaeus, according to Adams, "states decidedly, that there is sometimes a loss of motion alone, and sometimes of sensibility; the reason of which he supposes to be, that the sensory and motory nerves are distinct from one another". Adams, op. cit., p. 397-8. Caelius Aurelianus says that paralysis produces loss of sensibility, or of motion, or of both. Ibid., p. 399. ar-Rāzī says that the nerves of sensibility and motion may be affected separately. Ibid., p. 401.

²⁰⁸ R.-D., pp. 184-5.

against cold food.²⁰⁹ The same therapy is prescribed for a bladder that cannot hold the urine for its weakness.²¹⁰

I'd like to conclude this section by pointing at another effect of blows on the human body. In a short Arabic fragment which appears in ar-Rāzī' book al-Hāwī Rufus attributes the incitation of arthritis to a blow or toil.²¹¹ Unfortunately the fragment is too short to link that external factor (blow) to humours. Nonetheless it is clear enough to indicate an external influence on joints not as a cause of illness itself but as a cause of exacerbating the disease.²¹²

Conclusion

We have seen in this chapter Rufus using air to explain the occurrence of symptoms and to justify the prescription of particular therapeutic measures. Air as one of constituents of climate causes plague. Air which is internally produced in the

²⁰⁹ ar-Rāzī, X, p. 91; Sideras, op. cit., p. 164, 12. For therapy the Arabic fragment recommends running, unguents, rubbing with herbs and oil, clysters, swimming, drinking some medicaments, vomiting, and cataplasms. The Greek text adds as possible therapies climbing the hills as a method of exercising, rubbing the affected parts oneself or by others, softening with greasy cerate, fomentations and emollients. Sideras, op. cit., pp. 162-4. It is noticeable that though Rufus does not include bleeding both early (Celsus) as well as later authorities (Caelius Aurelianus and ar-Razi) recommend it. Adams, op. cit., p. 397-8; p. 399; p. 401 respectively.

²¹⁰ ar-Rāzī, X, p. 91; Sideras, op. cit., p. 164, 11.

²¹¹ ar-Rāzī, XI, p. 202.

²¹² Paul of Aegina considers accidents such as a blow or a sprain as proximate cause arousing the materials responsible for the disease. Adams, op.cit., vol. I, p. 657. ar-Rāzī gives the Arabic version of Paul's text. ar-Rāzī, XI, p. 133 f.

body is also capable of harming it when it is of morbid quality or when it arrives at one organ instead of another. Rufus' belief in a harmful effect of air both internal and external is influenced by Hippocrates and his tripartite division of the harmful influence of air on the human body. Hippocrates' influence on Rufus is also apparent on Rufus' blaming water for lithiasis and arthritis. However Rufus' originality is evident in his account of the guinea worm as he appears to be the first medical writer to link drinking water with the occurrence of the disease. In this chapter I have also demonstrated Rufus' awareness of the effect of bites of mad dogs, some weather conditions and blows, all external factors on the human body. Rufus' importance lies in his interest in rabies, ophthalmology and paralysis and in explaining them by such external factors. A relationship between these external factors and humours is not apparent in paralysis while there is a possibility of its presence in what concerns some of the eye ailments and rabies. While there is evidence of morbid influence of humoral vapours on the body, there is no apparent link between water and humours. That could mean that external factors could act upon the human body without influencing humours or qualities.

Chapter Three. Internal Causes of Diseases

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Introduction

In the preceding chapter we have discussed what Rufus thinks of the influence of the so-called external factors on the human body, and of air and water which may be either internal and external. In this chapter I am going to discuss the influence of four more factors Rufus holds responsible for illness. These factors are humours, what can be called "pathological anatomy", mental afflictions, and finally diet. As one can see, these four factors are internal factors. The aim of this chapter is to complete our understanding of Rufus' particular way of explaining illness and to measure his originality in this particular interest : disease causation.

ag

I Humours

Introduction

It was the main concern of the Greek philosophers to find an answer to one persistent question: what is the origin of the world (macrocosmos) as well as of the human being (microcosmos)? The Ionic philosophers gave some answers. Each of them considered one of the elements in turn air, water, fire and earth, as the sole origin of the world's and the

human's creation.¹ Then came the Pythagoreans who were concerned with the same problem but had a special interest in numbers. They considered number four a significant number.² One of their alleged members is Alcmaeon of Croton. He was the first to define health as a balance not of elements but of an unlimited number of qualities.³ Pythagorean ideas exercised a great influence on Greek thought. We see Empedocles adopting the number four to build a tetrad of elements air, water, fire and earth which are answerable for the composition as well as the decomposition of the world as well as the human body.⁴ There are two forces that control the process of unity and separation (which are the two ways of composition and decomposition). These are love and hate.⁵ In order to achieve the perfect physical combination these elements should be

¹ Erich Schöner, Das Viererschema in der antiken Humoralpathologie (Sudhoffs Archiv. Beiheft.4, 1964), pp. 5-6.

² Raymond Klubansky, Erwin Panofsky, and Fritz Saxl, Saturn and Melancholy: Studies in the History of Natural Philosophy, Religion, and Art, London, 1964, p. 4. They add that Philolaus, who was living in the fifth/fourth century, described the number four as the principal of health. See p.5.

³ E.D. Phillips, Greek Medicine, London, 1973, pp. 20-21. Parmenides believed that the human body was composed of qualities (heat and cold) while death is the quenching of heat. Nils Alberg, Studier Över Temperamentläran I corpus Hippocraticum, Lund, 1950, p. 112. Harig thinks that it is probable that Zeno was the first to fix the four major qualities in the place of the elements, from which every thing is composed and to which is decomposed. Georg Harig, Bestimmung der Intensität im medizinischen System Galens, Berlin, 1974, p. 40.

⁴ There are several works which discuss that topic. For instance Alberg, op. cit., p. 111.

⁵ Harig, op.cit., p. 39.

proportioned in quality as well as in quantity.⁶ Whether Empedocles attributed to these elements qualities or not is a controversial matter among modern scholars.⁷

The Hippocratic writings as a medical corpus reflect various views of the composition of the human body as well as an understanding of health. One finds in some of the writings 1 or 2 dominant elements, in others 4 qualities or an unlimited number of them, or 2 or 3 or 4 humours⁸, or qualities⁹ as constituents of the human body.

In the treatise The Nature of Man there is a rejection of the elements as constituents of the body. Instead the tract's author declares for a system of the four humours, blood, phlegm, yellow bile and black bile. It seemed that there was a need to introduce liquids into the system in order to be able to penetrate the solid parts of the body.¹⁰ They are tangible and can be mixed and unmixed.¹¹ Besides, it was

⁶ Klibansky, op.cit., p. 6.

⁷ Schöner thinks that it is not clear whether Empedocles attributed to the elements some qualities. Schöner, op. cit., p. 14. Harig thinks it is unclear if Empedocles fixed certain qualities to each element. Harig, op.cit., p. 40. Klibansky maintains that Philistion adjoined a single quality to each element. Klibansky, op.cit., p.7. Schöner also attributes to the Stoics and not to Aristotle the granting of qualities to the elements. He also discusses Posidonius. Schöner, op.cit., pp. 77-80.

⁸ See Schöner, op.cit., pp. 15-17; 55-57. On Galen's efforts, see *ibid.*, p. 88; Almborg, op.cit., pp. 112-3.

⁹ Henry Sigerist, A History of Medicine, New York, Oxford University Press, vol. II, 1961, p. 318.

¹⁰ W.A. Heidel, Hippocratic Medicine: its Spirit and Method, New York, Columbia University Press, 1941, p.54.

¹¹ Sigerist, op.cit., p. 325.

difficult to maintain that the celestial elements had a presence in their raw shape in the human body. The humours satisfied the need by having the qualities of the elements.¹²

There is a sort of agreement among modern scholars to attribute the emergence of the humours in medical thought to clinical observation. Phlegm is seen running from the nose, yellow bile in urine, blood in bloodletting.¹³ Yet Lloyd, though agreeing with that attitude, proclaims that the theory itself is speculative.¹⁴ Nonetheless, the only humour on whose emergence modern scholars are divided is black bile.¹⁵

Black bile made a late appearance as a normal constituent. Its early emergence was as a pathogenic agent.¹⁶ In the H.C. we have also three humours bile, phlegm, and blood besides water, and, it is argued black bile took over the place of water, thereby establishing the celebrated four humours. Some modern scholars explain the late emergence of black bile as the fourth humour on the assumption that the season of autumn, with which black bile is associated, was itself only slowly differentiated from summer, but this is an unpalatable

¹² Klibansky, op. cit., pp. 3-10.

¹³ Cf. Schöner, op.cit., p. 14; 55-6; Sigerist, op.cit., p.319.

¹⁴ G. Lloyd, Hippocratic Writings, New York: Penguin, 1978, p. 26. See Schöner, op.cit., pp. 55-57.

¹⁵ Timken-Zinkann names those modern scholars who believe in the actuality of the black bile and those who maintain its fallacy. R.F. Timken-Zinkann, "Black bile. A review of recent attempts to trace the origin of the teachings on melancholia to medical observations", Medical History, 12, 1968, pp. 288-292. See also Schöner, op.cit., pp. 55-57; Langholf, Medical Theories in Hippocrates, pp. 46-50.

¹⁶ Sigerist, op.cit., p. 320.

hypothesis.

In an endeavour to prove a correlation with reality Sigerist said that black bile has a basis in medical observation. It is seen in the urine of sufferers from blackwater fever, as well as in the vomit of those who have carcinoma of the stomach, and in the stools of those who suffer from bleeding gastric ulcers.¹⁷

Timken-Zinkann, reviewing the investigations on the introduction of b.bile into the theory of humours says that by studying the Epidemics I and III one can maintain that

blackwater fever was the primary source for the assumption of a black bile and for the later connection of black bile with the spleen.¹⁸

This view supports in fact the assumption that even black bile was introduced by observation.

The four humours are constituents of the human body. They are produced out of food.¹⁹ Quality and quantity of food control their excess or deficiency.²⁰ Their being well mixed as well as being balanced means health while the opposite means illness.²¹ They cause disease when they are either in excess or deficit or exposed to external factors such as heat,

¹⁷ Ibid.

¹⁸ Timken-Zinkann, op.cit., p. 291. See also ibid., p. 289.

¹⁹ Lloyd says that there is no agreement on the number, origin and role of the humours in the H.C. Lloyd, op.cit., p.25.

²⁰ Ibid., p. 24.

²¹ Ibid., p. 26.

cold, violence or so forth.²² The dominance of one of the humours in an abnormal way creates a materia peccans which should be expelled.²³ They correspond to the seasons, time of life, elements, and each has a pair of qualities.²⁴ Timken says that the parallelism of the humours to the elements was a later development ²⁵, as was the hypothesis that among the various reservoirs in the body ²⁶, the spleen was the source of black bile.²⁷ In order to preserve health, purgation twice a year is recommended. Purgation and bloodletting are prescribed to ensure the balance of the body.²⁸ The mixing together of humours is called temperament. A temperament can acquire the dominance of a quality or a humour. We do not have in the Hippocratic writings psychic temperaments, which were known later on.²⁹ The humoral doctrine has survived through the Middle Ages till the nineteenth century when it was overthrown by the discoveries of science. However it still survives in popular ideas and in "Yunani" medicine.

Having surveyed the history of the humoral doctrine it is of great value to devote a study to humours in Rufus' writings and fragments, to examine the places and process of their

²² Sigerist, op.cit., p. 319.

²³ Ibid., p. 327.

²⁴ Klibansky, op.cit., p.10.

²⁵ Schöner, op.cit., p. 104.

²⁶ Sigerist, op.cit., p. 319.

²⁷ Timken-Zinkann, op.cit., p. 289.

²⁸ Alberg, op.cit., p. 114.

²⁹ Ibid., p. 121.

production in the body, and their role in health and sickness. Yet, as Rufus does not assign a treatise or even a part of a treatise to discussing humours in the way one finds in both Hippocrates and Galen, one has to survey his surviving writings and collect the bits and pieces from which one may construct a fair picture of his ideas and concepts concerning humours.

Definition

Towards the end of his treatise On the naming of the parts of the human body Rufus defines blood as ὁ χυμός . He then describes phlegm as white, thick and quite salty; black when it dries up. Bile is divided into four types : yellow ξαυθή ; greenish yellow πρασοειδής; green ἰώδης ; and black μέλαινα . Both phlegm and bile carry the same term perissoma.³⁰ On calling phlegm and bile perissoma Rufus categorises them with saliva στέλος , mucus μύξα , sweat ἰδρῶς , urine οὖρον , gas φῦσα (περιστόν πνεύμα) , ear wax κυψελίς , menses καταμήνιος, milk γάλα , and sperm σπέρμα , each of which carries the label perissoma.³¹

Hippocrates does not use the term perissomata for humours. In fact, it seems that he differentiates between perissomata and

³⁰ R.-D., pp. 164-5, 218-9/222-223.

³¹ R.-D., p. 165, 222-223/226. Rufus seems constant in applying to mucus the term perissoma, for earlier on in the same work he says: Ἀθηναῖοι δὲ τὸ περισσῶμα τοῦτο κόρυξαν καλοῦσιν. Ἱπποκράτης δὲ τὸ διὰ αὐτῶν φλεγμάτων δὲς περισσῶμα ἰὸν μύξαν καλεῖ.

Cf. R.-D., p. 137, 33.

humours.³² The big authority who uses this term to denote phlegm and bile is Aristotle.³³ Yet, though he agrees with Rufus on calling as well as phlegm and bile, gas, milk, sperm, sweat, menses and mucus perissomata, he does not include saliva or ear wax among them.³⁴ On the other hand, he includes blood, faeces as well as other things in his list.³⁵ The same term occurs also in Anonymus Londinensis.³⁶ But the only two authorities in whose accounts the term is identified with

³² Cf. Littré, Oeuvres d' Hippocrate, tom. IX, p. 398. Hippocrates says : ὡςπερ σίκυαν, τῶν εἰσφερομένων ἀπάντων συμβαίνει αὐτὴν ἔλκειν περιττώματα καὶ τοὺς λεπτομερεῖς χυμοὺς.

" (sic.) The head, acting like a cupping glass, attracts to himself all the residues and fine humours." Edelstein doubts the suggestion raised by Pohlenz that the term, in the sense of remnants of food, was not in use before Diocles. See Edelstein, Ancient medicine; selected papers of Ludwig Edelstein. Edited by Owsei Temkin and C. Lilian Temkin. Translations from the German by C. Lilian Temkin. Baltimore, Johns Hopkins Press. 1967, p.112.

³³ Mani noticed the correspondence between Rufus' designation of bile and the Aristotelian one. Cf. Mani, Die Vorstellung über Anatomie, Physiologie und Pathologie der Leber in der Antike, Basel 1959, p. 55.

³⁴ Pseudo-Aristotle includes gas among the perissomata. Cf. Problems, 916 b 6- 917 a 22. See also the section on air.

³⁵ For the perissomata in Aristotle's works Cf. Aristoteles Opera, ex recensione Immanuelis Bekkeri, editio altera quam curavit Olof Gigon, volumen Quintum, index Aristotelicus, edidit Hermannus Bonitz, 1961, s. v. perissoma.

³⁶ It appears in the accounts of the following authors Euryphon of Cnidus (IV.35-9), Herodicus of Cnidus (V.1-34), Hippocrates (V.35-VII.40), Alcamenes of Abydos (VII.41-VIII.10), Timotheus of Metapontum (VIII.11-34), Ninyas the Egyptian (IX.37-XI.16), Dexippus of Cos (XII.8-36), Aegimius of Elis (XIII.21-47), Plato (XIV.1-XVIII.8) and Petron of Aegina (XX.1-23). Cf. W.H.S.Jones, The Medical Writings of Anonymus Londinensis, Cambridge University Press, 1947.

phlegm and bile are Dexippus of Cos and Plato.³⁷

Having given Rufus' classification of humours it is time to discuss how they are produced in the human body. Rufus believes in a strong link between food and the production of humours in the body. Humours are in fact the products of food. He insists that patients of psora of the bladder should obtain a diet which produces good humours.³⁸ One may be allowed to say that when Rufus says that food goes to the veins to nourish³⁹ or to harm⁴⁰, or that it also goes to the head⁴¹ he means humours that are transformed from food. Moreover certain kinds of food have the ability of producing certain humours e.g. foods and drinks in general produce blood⁴², while pomegranates as well as wine increase it⁴³; on the

³⁷ Perissomata in the other accounts stand for the residues of food without any further identification. It seems to me that Rufus means by perissomata first what the body excretes and gets rid of, and second those things which are the products of food.

³⁸ Sideras, Über die Nieren- und Blasenleiden, p. 160, 8.

³⁹ R.-D., fragment no. 59, p. 317,5 (purgatives clean first then go to the veins to nourish); Orib. Coll. Med. II, 61, p. 166, 4; idem, Synopsis IV, 40, p. 191, 3-4; Ibn al-Baitār IV, p.96 ff (milk).

⁴⁰ ar-Rāzī, al-Hāwī, V, p. 216. Here Rufus speaks of corrupted food going into the veins and provoking as the poisons do.

⁴¹ ar-Rāzī, II, p. 96.

⁴² Sideras, Über die Nieren und Blasenleiden, p. 128,2-3; R.-D., De Podagra, p.252-3; ar-Rāzī, XI, p. 216; XXIII, p. 105. Wine is reputed for its quickness in transformation into blood. See ar-Rāzī, XXI, p. 90.

⁴³ Orib. Coll. Med. lib. incert. 4, 47 (pomegranates); ar-Raḡīq an-Nadīm, p. 227 f (wine). Wine also quickly turns into blood. Cf. ar-Rāzī, XXI, p. 90.

other hand sharp foods make the blood more fluid.⁴⁴ Cheese produces phlegm universally ⁴⁵, while milk produces it in babies.⁴⁶ Rufus recommends vomiting to get rid of phlegm when the milk of nurses turns bad i.e. becomes thick.⁴⁷ Though milk usually turns into phlegm yet it can also turn into bile in the stomach of hot-tempered people, those who have hot jobs and live in hot countries.⁴⁸ This, of course, is considered a bad effect. Wine as well as some sorts of fish fill the body with phlegmatic humours.⁴⁹ There is also a regimen which provides bile.⁵⁰ A small amount of water turns in a warm stomach into yellow bile.⁵¹ Moreover fruits and other things can produce cold humours.⁵²

One can notice that Rufus is silent on the quantity of food needed for the production of humours. Yet he still pays attention to two points : repletion or satiety of food as well as its deficiency. He maintains that deficiency of food has a

⁴⁴ Aetius, XVI, chap. 50.

⁴⁵ Orib., Coll. Med., lib. inc. 13, p. 125, 17-18.

⁴⁶ Orib., Coll. Med., lib. incert. 20, p. 158, 17.

⁴⁷ Orib., Coll. Med., lib. inc. 13, p. 125, 22.

⁴⁸ Ibn al-Baiṭār, IV, p. 96.

⁴⁹ It is in the bad sense that too much wine fills the body with phlegmatic humours. See Karl Garbers, Maqāla fī l-maliḥuliya: Ishāq ibn Imrān und Constantini Africani libri duo de melancholia, Hamburg, 1977, for Rufus' quotation apud Constantine the African (p. 184, B.p. 293 (393)). For fish see R.-D., De Podagra, p. 260, 3-4.

⁵⁰ ar-Rāzī, XI, p. 135.

⁵¹ Krankenjournal, VII, 15.

⁵² ar-Rāzī, I, p. 139.

harmful effect on humours as it affects their qualities⁵³ and turns one into the other.⁵⁴ Rufus speaks of the number of meals and its effect on humours as he says that eating once a day slims, constipates and provokes the bile; while eating twice a day is the opposite.⁵⁵ On the other hand repletion as well as satiety in babies have a very distinctive influence for they may disturb their health through indigestion and the formation of more bile.⁵⁶

While he acknowledges that food has the authority to reform the temperament⁵⁷, and improve the quality of the humours⁵⁸ he gives the impression that it can be useless or

⁵³ Kl., IX, 24.

⁵⁴ Manfred Ullmann, Die Schrift des Rufus von Ephesos über die Gelbsucht, Göttingen, 1983, (Arabic text, 67). Blood can turn to bile see R.-D., frg. 79, p. 381, 22.

⁵⁵ ar-Rāzī, VI, p. 247.

⁵⁶ Ibn al-Jazzār, Kitāb Syasāt al-sibyān wa tadbīrihim, edited by M. Hilah, al-Dar al-tunisiyah : Tunis, 1968, p. 67, 7-9. Ibn al-Jazzār attributes this fragment to Galen. Yet one finds the same passage attributed by al-Baladī in his book K. Tadbīr al-Habāla wa al-atfāl to Rufus. See al-Baladī II, 39. The Greek fragment which appears in Oribasius has Rufus' lemma. Cf Orib., Coll. Med., lib. incert. 20, p. 159, 21-22. Ibid., lib. inc. 42, 5 (C.M.G.=chapter (24) in Daremberg's edition).

⁵⁷ Orib., Coll. Med., lib. inc. 4, 3.

⁵⁸ " Wine maturates what is raw and hence digests it and transforms it into good and plausible humour". ar-Raqīq an-Nadīm, p.227. Wine also improves the quality of blood. See ar-Rāzī, XXI, p. 90; Orib., Euporista I, 12. Milk also improves the humours. See Ibn al-Baiṭār, I, p. 158; IV, p. 96 ff. Wine diluted with water is beneficial in cholera (Arabic al-haidda) for it reforms the chymoi. See ar-Rāzī, V, p. 232; XXI, p. 90.

even harmful when it produces bad humours.⁵⁹ For instance, celery can fill the uterus with ichor as well as sharp substances.⁶⁰ Not only that but bad milk, bad digestion or even something in the mother's womb lead to aphthae in babies.⁶¹ Food can change the humours' qualities for the worse.⁶² Moreover food may also have an effect on the menstrual discharge. Rufus says that certain kinds of food such as the thick and phlegmatic are hostile to menstruation, while thick and new wine, cold and hard water, besides excessive toil and hard work, are not expedient in such circumstances.⁶³

Yet one can recognize a third influence of food in relation with humours. Food has the power to discharge or expel the noxious humours e.g. thyme can discharge phlegm and expel bile.⁶⁴ Wine can also attenuate the phlegm and clean the

⁵⁹ Orib., Coll. Med., lib. incert., 4, 42 (fenugreek is hard to digest and produces bad humours in women). See also supra.

⁶⁰ Oribasius, Coll. Med., lib. inc. 4, 32. Vinegar is contrary to phlegm. Cf. ar-Rāzī, XX, p. 449. ar-Rāzī says that Hunain explains it on the grounds that it clots the phlegm.

⁶¹ al-Baladī, K. Tadbīr al-Habālā wa-l-atfāl, Maq. III, Bab 1, 51; 52 (other diseases as well); Orib., Coll. Med., lib. inc. 42(24), p. 148, 1.

⁶² Sideras, die Nieren und Blasenleiden, p. 158, 3-4; Orib., Coll. Med., lib. inc. 13, p. 125, 17-18. A new wine boiled down (siraios) makes the blood thick. See *ibid.*, V, 9, p. 357, 3.

⁶³ Aetius, XVI, chap. 50.

⁶⁴ Orib., Coll. Med., lib. in. 4, 38; 40. It is considered a good effect. For more examples see *ibid.*, VII, 26.

urine from bile.⁶⁵ Vinegar can both resolve the clotting blood and milk ⁶⁶, and attenuate the thick humours.⁶⁷

One cannot find a specific role given by Rufus to humours, yet one can see that he thinks that humours themselves can produce milk or at least play a great part in its production ⁶⁸, on the other hand pus is also produced out of blood.⁶⁹ Yet it is hard to explain Rufus' silence of the actual process by which food turns to humours.

Rufus does not say much about the quantity of food needful for the production of humours or about the process itself of transformation from food into humours. If he is silent about all these points, he equally does not say enough about the place of their transformation and the routes they take or the reservoirs that one assumes they own in the body. Yet there is scattered information about bile which may enable us to construct a fair picture of its place of production and the routes it takes in the body.

Rufus asserts that bile is produced in the gall-bladder which is a small sinewy vessel similar in nature to the

⁶⁵ Orib., Euporista I, 12; ar-Razi, XXI, p. 90 (wine cleans the veins); ar-Raqīq an-Nadīm, p. 227.

⁶⁶ ar-Rāzī, XIX, p. 409.

⁶⁷ ar-Rāzī, XX, p. 449; Ibn al-Baitar, II, p. 66.

⁶⁸ Orib., Coll. Med., lib. incert. 14, p. 129, 3.

⁶⁹ One of the reasons that impede the menses is purulent diarrhoea. In addition to that sweat, excessive vomit as well as skin florescence leads to the same result. Aetius, XVI, chap. 50, p. 70. In the same passage Rufus declares that blood can produce fat. For purulent diarrhoea see Hippocrates and also Galen, XVII B, 113.

bladder. The gall-bladder contains the bile which goes afterwards through the (bilious canal) (a sinewy tract) across the mesentery into the intestine (duodenum).⁷⁰ In a fragment that appears in Aetius which discusses the causes as well as the symptoms of jaundice Rufus declares that the job of the gall-bladder is to attract the bile from the blood. But when it fails to function, because of its atonia, the result is that blood is impure and that jaundice occurs.⁷¹ If one combines the two accounts together, one can understand that bile is mixed with blood and the job of the gall-bladder is to attract that bile out of the blood to produce pure bile, then it is sent to the body through the bilious canal. Bile has a specific job in the body. According to Rufus it goes to the kidneys to colour the urine as well as to the intestine to colour the stool and provoke excretion.⁷² The effect of any inability to descend to the intestines and to the kidneys is the whiteness of the urine and the stool besides the occurrence of jaundice.⁷³

Yet one has to pay close attention to the colour of the bile. For, although Rufus uses the term chole in general he specifies the type of chole as xanthos (yellow).⁷⁴ Moreover

⁷⁰ R.-D., p. 176, 30. One must add that the terms gall-bladder, bilious canal, and duodenum belong in fact to Daremberg. For Rufus does not name here the organs he is talking about. See *infra*.

⁷¹ R.-D., frg. 79, p. 380, 16. In this fragment gall-bladder is named either by Rufus or by Aetius.

⁷² R.-D., p. 176, 30; frg. 79, p.378, 7.

⁷³ *Ibid.*

⁷⁴ *Ibid.*

on another occasion he gives us the right to believe that the bile he has been talking about is in fact a humour, whatever a humour may mean in his accounts.⁷⁵

What is also interesting in these two accounts is the relation between organs. Rufus declares that out of the gall-bladder the bilious canal goes through to both kidneys and intestines. Yet again he says that there are vessels that go out of the gall-bladder to the liver. Unfortunately Rufus does not mention if the vessels mentioned in the two accounts are the same. Moreover Rufus is silent about the function of the liver and the material out of which bile is produced and how it arrives at the gall-bladder. He also does not attribute any other function to bile except colouring the body's excrement which is indeed interesting.

We have discussed the source and the place of the production of humours in the human body. One needs to examine what is called the temperament.

The human body can be subject to the dominance of one of the humours ⁷⁶, or one or two of the qualities ⁷⁷ in sickness

⁷⁵ R.-D., fragment no. 79, p. 379, 14.

⁷⁶ Sideras, Über die Nieren und Blasenleiden, p. 114, 3-4; R.-D., fragment no. 66, p. 346, 24 (those who produce more black bile or yellow bile); ar-Rāzī, VI, p. 287 (in fat people the phlegm is abundant and it is the worst of humours while the blood is little and it is the best), XI, p. 139 ; Oribasius, Coll. Med., lib. inc. 20, p. 158, 17 (Babies tend to be naturally phlegmatic);. Kl. VII, 2 (bilious).

⁷⁷ Sideras, op. cit., p. 114,4; R.-D., fragment no.60, p. 321, 19 (warmer, more humid); Orib., Coll. Med., lib. incert.2, p. 86, 21-22 (humid, cold, warm); ibid., lib. inc 4, p. 89, 1-2 (women are more humid and colder than men); ibid., lib. inc. 6, p. 99, 4 (pregnant women should not be humid nor full up); ibid., lib. inc. 20, p. 159 (babies are cold); ibid., VI, 38, p. 542, 9 (humid, cold, dry, warm);

and in health ⁷⁸, and it is known by that dominance.⁷⁹ Not only the body as a unit has its own temperament (balance) but also each organ.⁸⁰ Humours have primary qualities of their own. For instance the melancholic humour is cold and dry.⁸¹ They can also obtain some other qualities both in sickness and in health.⁸²

We have seen how humours produced out of food are

ibid., VIII, 24, p. 220, 61 (hot, wet); Ibn al-Baiṭār, IV, p. 96 ff; ar-Rāzī, I, p. 313, p. 278, XI, p. 139, al-Burqumānī, Maqāla al-Muhsinya fī hifz as-sibha al-Badaniya, Ms. Bodl. I. 612, (p.) 51 ff (warm, cold, humid); al-Baladī, II 44; KJ, VII,2 (warm tempered); XVI, 1 (hot tempered); Ullmann, Über die Gelbsucht, 69 (watery fat or dry slim); Aetius, XVI, chap. 50, p. 69 (warmer). There is also sharp tempered. See KJ., III, 4; ar-Rāzī, X, p. 278 (dry tempered, bad).

⁷⁸ In sickness: Orib. Coll. Med. VII, 26, pp. 93, 12; 98, 19 (more phlegm); 132, 157; 141, 190 (excessive phlegm and bile).

⁷⁹ Infusion of cold water after a hot bath restores the temperament of the body. See Rufus apud Constantine the African in Karl Garbers' edition of Ishāq ibn 'Imrān's and Constantin's books on melancholy, p. 189 (B.p. 296(396)).

⁸⁰ R.-D., De Podagra, p. 261 (some bellies are more humid, others are drier or colder), R.-D., fragment no. 70, p. 355, 6 (the orifice of the stomach is cold in melancholy); Ibn al-Baiṭār, IV, p. 96 ff.(hot tempered stomach); ar-Rāzī IX, p. 96 (fat woman, if the humidity is evacuated from her womb and the latter is heated, conceives); R.-D., fragment no.70, 355, 8 (the stomach in melancholy is cold), ibid., p. 356, 9-10 (the two bellies are dry in melancholy), fragment no. 79, p. 378, 6 (hot dyscrasis of the liver); KJ. XI, 2 (his head's temperament became cold).

⁸¹ R.-D., fragment no. 70, p. 355, 4. There are also watery humours. See R.-D., De Podagra, p. 266, 5. For dry humours see KJ. II, 20.

⁸² Sharp: KJ.I, 10; ibid., VII,1; gluey: ibid., I, 2,6; R.-D., De Podagra, p. 275; thick: KJ. I, 3; R.-D., De Podagra, p.283; ar-Rāzī, X, p. 88; Orib. Coll. Med. VIII, 39, p. 257, 11; viscous: R.-D., De Podagra, p. 275; acid: ibid., p. 267; biting: R.-D., fragment no. 59, p. 317, 7; Orib. Coll. Med. II, 61, p.167; biting and salty: ibid., lib. inc. 13, p. 12, 17-18.

transferred through the veins in the body and also how they obtain certain qualities. Now it is time to discuss their role in health or, in other words, how they can be dangerous to health.

Rufus has defined health as a balance of the primary elements i.e. the four qualities, hot, cold, wet, and dry.⁸³ He also has recognized the qualitative imbalance as both harmful⁸⁴ and even a cause of illness.⁸⁵

Rufus defines the balance as the norm while the imbalance is illness and is abnormal. On the other hand we have already seen Rufus discussing temperaments which entail the domination of one of the humours or one or two of qualities. One can reply that Rufus is in fact following the practice of his Greek predecessors where physicians talk about the perfect case which in reality never exists. It strikes the reader that the imbalance is qualitative such as cold imbalance⁸⁶, or hot⁸⁷, or hot and dry⁸⁸, or simply changed from hot to cold.⁸⁹

⁸³ Ibn al-Maṭrān, Bustān al-aṭibbā wa raudat al-alibbā, National library of medicine A 8, fol. 82 b 4 f. There is also a Greek fragment which deals with clysters. Rufus defines the sort of clysters needed for balanced people as well as when heat or cold dominate. See Orib., Coll. Med., VIII, 24, p. 220, 61.

⁸⁴ Kj., XVII, 8. See Ullmann's introduction to the text.

⁸⁵ Ibid., VII, 21; X, 8. we have also a fragment where Rufus says that pregnant women should not be phlegmatic or humid. Orib., Coll. Med., lib. inc. 6, p. 99, 5.

⁸⁶ Kj. XII, 2. The imbalance is a contributory cause of lethargy.

⁸⁷ R.-D., fragment no. 79, p. 378, 6 (a cause of jaundice); Kj. X, 8 (the imbalance is a contributory cause of lethargy).

⁸⁸ Kj., XVII, 8. It is a cause of paralysis.

Yet an imbalance without any quality to describe it can cause the illness ⁹⁰ or produce an unwanted humour responsible for the illness.⁹¹

Moreover, we have other evidence of the effect of qualities on health. Arthralgia occurs because of excessive humidity and deficit of heat and dryness.⁹² Lethargy can be produced by a humidity in the forehead.⁹³ Naturally hot crasis leads to suppression of menses.⁹⁴ Dryness which is due to plentiful heat leads to suppression of menses.⁹⁵ Cold pressurizes the rectum.⁹⁶ Moreover we have what Rufus calls cold diseases ⁹⁷ as well as hot and cold pains.⁹⁸

Yet, one cannot be positive of the meaning of humidity to which Rufus attributes some ailments of children. Is it a quality or a liquid ⁹⁹? The same problem is in arthritis when

⁸⁹ Kj., XI, 2. It is a cause of lethargy.

⁹⁰ R.-D., fragment no. 70, p.355, 8 (dyscratic stomach).

⁹¹ Kj., III, 8. A case of melancholy.

⁹² ar-Rāzī, XI, p. 216.

⁹³ Kj., IX.

⁹⁴ Aetius, XVI, chap. 50, pp. 69-70.

⁹⁵ Ibid.

⁹⁶ Orib., Coll. Med., VIII, 24, p. 206, 6-7.

⁹⁷ R.-D., fragment no. 65, p. 339, 1; Kj. X, 10; XVII, 5.

⁹⁸ ar-Rāzī, XI, p. 162 (hot); p. 219 (cold).

⁹⁹ ar-Rāzī, III, p. 55; al-Baladī, op. cit., Maq. III, 22. He also attributes to it an ailment of the ear. See Orib., Coll. Med., lib. inc. 42(24), 6. Yet in ar-Rāzī he says that this ailment of the ear the ignorant call pus while it is a superfluity of food as the humidity is this superfluity.

he talks about those joints into which much humidity pours.¹⁰⁰ In glaucoma the reason for the change of the colour which is responsible for the illness is dryness.¹⁰¹

Despite the uncertainty that involves the qualities and their position in Rufus' system one can easily discern the role of humours in sickness. Firstly, humours can increase in the body and hence endanger it. This case of abundance is called repletion. It is either of one of the humours or of all of them.¹⁰² Repletion by itself is an unhealthy state.¹⁰³ Yet it may have more dangerous consequences.¹⁰⁴ For instance apoplexy is a result of a repletion of humours¹⁰⁵, dim-sight is due to a repletion of sluggish humours¹⁰⁶, girls who do not get married fall into plethora which leads to illness.¹⁰⁷ Moreover girls are encouraged to reduce their diet before their periods and take rest so the amount of blood will be

¹⁰⁰ ar-Rāzī, XI, p. 219.

¹⁰¹ R.-D., fragment no. 116, p. 441, 1. Cf. Orib., Synopsis VIII, 49, p. 452-3, 1-2; see above. See the section on ophthalmology.

¹⁰² R.-D., On Satyriasis and gonorrhoea, p. 72, 19 (of humours), 74, 25 (of air or blood or both of them); fragment no. 60, p. 320, 12; fragment no. 69, p. 353, 7 (of blood); Orib., Coll. Med. VII, 26, p. 91, 3 (of phlegm, bile or some other humours) ; ibid., VIII, 24, p. 215, 38-9, (of sluggish humours), ibid., XLV 30, p. 85, 7, p. 96, 51 (of humours); ibid., lib. incert. 2, p. 82, 1, p. 88, 28 (of blood).

¹⁰³ R.-D., fragment no.60, p. 320, 12; fragment no.69, p. 353, 7; Orib., Coll. Med. VII, 26, p. 91, 3, p. 105, 36; ibid., XLV, 30, p. 96, 51.

¹⁰⁴ Orib., Coll. Med. VIII, 24, p. 215, 38-9; ibid., XLV, 30, p. 89, 7, p. 96, 51; ibid., lib.incert. 2, p. 82, 1, p. 88, 28; ar-Rāzī, I, p. 135.

¹⁰⁵ Orib., Coll. Med. XLV, 30, p. 85, 7.

¹⁰⁶ Orib., Coll. Med. VIII, 24, p. 215, 38-9.

¹⁰⁷ Ibid., lib. inc. 2, p, 82, 1.

diminished, for plethora is not easy as it distends the uterus, pains and produces a disposition similar to an inflammation.¹⁰⁸

There is another dimension of the influence of humours on the body. When one of the humours is present in one of the parts of the body where it should not be, it indicates a morbid state which needs reformation. One can clearly see this in the case of phlegm in the stomach. When phlegm is present in the stomach, emetics should be applied¹⁰⁹, or even clysters.¹¹⁰ Its presence may be even an indication of some illness such as epilepsy.¹¹¹ It can cause atrophy, indigestion and paleness.¹¹² One may tend to believe that Rufus attributes to the presence of phlegm in some parts of the body the cause of angina as he describes some medicaments to expel such a humour.¹¹³

Humours, though they are the constituents of the human body, can engender illness. In other words they are both healthy and unhealthy.¹¹⁴ They may bring about a lasting state which is known in Greek as kakochymia. This morbid state can be due, according to Rufus, to a change of temperament of

¹⁰⁸ Ibid., p. 88, 28.

¹⁰⁹ R.-D., fragment no.69, p. 353, 7.

¹¹⁰ Orib., Coll. Med., VIII, 24, p. 220, 61.

¹¹¹ Kl., XVI, 2-4.

¹¹² Orib., Coll. Med. VIII, 24, p. 213, 30.

¹¹³ ar-Rāzī, III, p. 267.

¹¹⁴ For the unhealthy see ar-Rāzī, VIII, p. 74; XI, p. 133, 139, 216; XIV, p. 250.

an organ (liver) ¹¹⁵ or directly to an organ such as the spleen without identification of its specific condition.¹¹⁶ Yet it is responsible for a disease such as elephantiasis.¹¹⁷ It can also be one of the reasons for eye troubles.¹¹⁸ Yet Rufus also identifies some cause of the morbidity of humours. For instance medicaments as well as wrong diet may engender unidentified morbid humours which eventually cause illness.¹¹⁹ Moreover ill-temperament can produce a black bile which in its turn produces melancholy.¹²⁰ Whether in the first case of the Krankenjournal the morbidity of the humour is the cause of the illness or simply its unwanted presence in the stomach, one cannot tell.

As Rufus groups diseases according to the humour responsible ¹²¹, one may be permitted to believe that he means that the abundance of one of the humours is the cause of the illness. Whether they are also morbid or not and what

¹¹⁵ R.-D., fragment no. 79, p. 379, 15.

¹¹⁶ Ibid., p. 381, 22.

¹¹⁷ Orib., Coll. Med. XLV, 30, p. 94, 44.

¹¹⁸ R.-D., fragment no. 116, pp. 441-2, 6.

¹¹⁹ For medicaments see Ki., I, 10 (sharp humour out of medication habituation). Again drying medicaments sometimes in case of arthritis subtract the fine humours and harden the thick ones to create tuff stones. See R.-D., De Podagra, p. 283-4. For wrong diet see Ki., IX, 2-3.

¹²⁰ Ki. III,8; ar-Rāzī, I, p. 218; II, p. 162.

¹²¹ According to Hippocrates coitus terminates diseases of phlegm. Orib., Coll. Med., VI, p. 542, 7-8; R.-D., fragment no. 60, p. 320, 16-17; ar-Rāzī, X, pp. 292, 313. There are also bilious diseases (ar-Rāzī, XI, p. 137), bilious fever (Orib., Coll. Med. XLV, 30, p. 98) and phlegmatic hiccup (ar-Rāzī, V, p. 169; an-Nuwairī, p. 75).

causes them to be so is hard to discern in Rufus' accounts. Yet there might be some factors that control or play a part in the salubrity of the humours as one can see Rufus recommending the bi-annual purgation of humours in spring as well as in autumn.¹²² Its purpose is to get rid of the bad excretions that the blood has acquired in winter and which may lead to melancholy in spring.¹²³

Black bile

Rufus' interest in melancholy has won him the eulogy of Galen and the Arabs.¹²⁴ This particular disease was linked with a very specific humour : black bile. Hence it is important to devote here a study to black bile, the method and the place of its production. The focus will be on its role in health and sickness.

Rufus, though admitting black bile as a sub-species of bile ¹²⁵, identifies it as the sediment of blood.¹²⁶ Almost

¹²² R.-D., De Podagra, pp. 265-266; Oribasius, Coll. Med. VII, 26, pp. 91; 94, 13-14; ar-Rāzī, XI, p. 162; XV, p. 22.

¹²³ ar-Rāzī, I, pp. 76-7; XV, p. 22.

¹²⁴ See the first chapter. Klibansky mentions that Rufus' merits lie, apart from the distinction between the morbid stuffs, in the distinction between the seats of illness. Moreover his therapeutical methods are interesting. Cf. Klibansky, op.cit., f.n. 141, pp. 53-4.

According to Flashar there were from the beginning of the medical interest in melancholy two aspects of the illness : the pathological and the characteristic (positive and negative symptoms). Both are evident in the H.C., but in Aristotle one finds the characteristic predominating. Only in Rufus this aspect seems stronger while it is not in Galen. Flashar, op.cit., p. 134.

¹²⁵ R.-D., p. 165, 221. It is worth noting here that, though Rufus differentiates between four types of bile, he concentrates almost entirely on only two types i. e. yellow

the same identification appears in some of his fragments in ar-Rāzī's al-Hawī.¹²⁷ Yet Rufus seems to differentiate between the two substances as he expresses the difficulty in identifying the liquid that goes from the liver into the stomach as either blood or black bile. For, as he confesses, "the two are close to each other in nature".¹²⁸ It is clear that Rufus admits its presence in the body in health.¹²⁹

Dealing with melancholy in fragment no.70 Rufus clearly states that heat and cold turn blood and phlegm into that humour. Ill-temperament can lead to the same result.¹³⁰

Moreover there are non-materialistic things that also produce the harmful substance such as old age, long studying,

and black. His list of purgatives shows that he is concerned with yellow and black bile. Only on two occasions do we find Rufus mentioning the other two types of bile (greenish yellow and fiery). Cf. R.-D., fragment no.66, p. 346, 24; fragment no. 79, p. 379, 13.

¹²⁶ R.-D., p. 165, 222-223. He adds that some call the black blood black bile as well. It is worth noting that Rufus calls black bile a humour. R.-D., fragment no.70, p. 355, 4. While he does not say explicitly melancholic humour Daremberg translates it so. Orib., Coll. Med., XLV, 30, p. 86, 14-15. In the Arabic fragments we have either simply the black (ar-Rāzī, I, p.77; VI, p. 86, 133; XIX, p. 429) or black bile (Ibn 'Imrān, fol. 112 a, 117 b) or black humour transliterated in Arabic (ar-Razi, VIII, p. 34, 87) or in its Arabic form (ar-Rāzī, I, pp. 74, 76).

¹²⁷ ar-Rāzī, I, p. 76.

¹²⁸ Orib., Coll. Med., XLV, 30, p. 97.

¹²⁹ Sideras, Über die Nieren und Blasenleiden, p. 114, 4. Rufus here talks of the black bilious type in contrast with the phlegmatic. In fragment no. 70 Rufus mentions two types of black bile: one is out of natural crasis and the other is out of bad diet. R.-D., p. 357, 19.

¹³⁰ Ki., III, 3-4.

attending on the nobles.¹³¹ In other words the noxious humour that causes melancholy is not permanent in the body but only produced under specific circumstances. It seems that there are two types of black bile: congenital which seems in normal circumstances unharmed, and non-congenital which leads to illness.¹³²

There is some evidence that black bile exists all the time in the liver while the spleen's function is to drag it out and hence clean the body.¹³³ When the spleen fails to function a type of jaundice results that is different from the usual jaundice associated with yellow bile.¹³⁴

We have just alluded to the fact that black bile is linked not only with melancholy but also with jaundice. It is of some importance to recognize that black bile plays a role not only in jaundice and melancholy but also in lethargy and epilepsy. We shall discuss each disorder in turn.

If the spleen is unable to attract the black bile from the blood, a different type of jaundice occurs.¹³⁵ In such a type the colour of the stool is less whitish than the other type; the urine's colour as well as that of the whole body is

¹³¹ The three causes appear in Kl. III, 8 while only the first two in ar-Rāzī, I, p. 75.

¹³² It is hard to tell whether in case no. 2 of Krankenjournal the surplus black bile is congenital.

¹³³ R.-D., fragment no. 79, pp. 379-380, 15.

¹³⁴ Ullmann has noticed that among the five cases of melancholy in Krankenjournal two of them involve a disorder in the spleen and a problem in digestion. See Ullmann, Krankenjournal, p. 118.

¹³⁵ R.-D., fragment no.79, p.379, 15.

blackish.¹³⁶ Yet black bile is not the cause of the illness for in fact the deficiency of the spleen is responsible. Yet black bile explains some of the manifestations.

The second disorder is lethargy.¹³⁷ The cause is black bile mixed with a little phlegm.¹³⁸ Unfortunately one cannot tell from the case whether black bile here is congenital or not. It is actually classified as "matter" مادة , whatever it is meant by it.¹³⁹

The third disorder is epilepsy which is accompanied with melancholy.¹⁴⁰ One tends to maintain that black bile is responsible for the two disorders epilepsy and melancholy. Besides, this morbid humour is, in fact, a production of digestion in addition to the patient's being hot tempered, and forty years of age.¹⁴¹

The most important of them all is melancholy.¹⁴² We shall start with Rufus' fragments in ar-Rāzī. Black bile causes melancholy not through its abundance in the body but

¹³⁶ Ullmann, Über die Gelbsucht, (Arabic text 8-9).

¹³⁷ Ki. , XIII.

¹³⁸ Ibid., 7, 10. Ullmann does not include such a case in his account of the cases black bile is responsible for.

¹³⁹ I tend to believe that the matter means here a produced harmful black bile.

¹⁴⁰ Ki., XVI.

¹⁴¹ Ki., XVI, 1-2. Ullmann mentions how the two disorders transfer to each other according to Hippocrates. Ullmann also mentions that it is possible that Galen in De locis affectis is influenced by Rufus Ki. XVI, 10. See Ullmann, Krankenjournal, p. 126.

¹⁴² Our references are frg.70, ar-Rāzī and Ki.

because of its diffusion in the blood.¹⁴³ He explains that if black bile is abundant but static, it does not cause melancholy while if it distinguishes itself from the blood and parades itself externally as in the case of leprosy or goes out of the body as in urine, black stool, enlargement of spleen and haemorrhoids, there will not be melancholy.¹⁴⁴

Yet the relief of the patient for melancholy is not only attained by the expulsion of the black bile but also by that of the phlegm and in fact he is more relieved with the expulsion of phlegm.¹⁴⁵ One can conclude that although there is evidence of the role of black bile in this illness, yet this role is shared with phlegm.

While in ar-Rāzī one can be positive of the existence of the humour by itself without the need of the transformation of another humour to develop black bile which eventually produces the illness, in fragment no. 70, Rufus maintains that by cooling blood or overheating yellow bile the black bile is produced which creates the illness.¹⁴⁶

On the other hand he mentions two types of black bile : the one which results from a natural crisis and the other which

¹⁴³ ar-Rāzī, I, p.76. On another occasion Rufus says that melancholy stirs in spring if the blood is melancholic. ar-Rāzī, XV, p. 212.

¹⁴⁴ ar-Rāzī, I, p. 76.

¹⁴⁵ Ibid; Ya' qūb al-Kashkarī, Kunnāsh fī al-ṭibb, Frankfurt am Main: Institute for the history of Arabic-Islamic medicine, 1985, pp. 260-1 (fol.124 b-125 a).

¹⁴⁶ Klibansky believes that while pseudo-Aristotle has the two qualities heat and cold embodied within the humour, Rufus has created two substances, instead of one, to blame for the disease. He also believes that Rufus' ideas had an influence on Galen. Klibansky, op.cit., p. 52.

comes from a bad diet.¹⁴⁷ The second one is worse.¹⁴⁸

Black bile seems responsible for some symptoms. By cooling the stomach it causes a dyscrasis which, along with the body being full of excrements, leads to continuous indigestion.

The outpouring of such a humour leads to the black coloration of the skin. The excessively burnt yellow bile explains some of the psychic symptoms such as delirium, rashness, passion, and even violence.¹⁴⁹

In the first and third cases of the Krankenjournale where melancholy is the illness Rufus speaks of burnt blood as the cause of the illness. In the first one he does not even mention black bile and it is difficult to identify the burnt blood with black bile. In case no. 3 Rufus begins by saying that it starts from the burning of blood. He again says that studying geometry, attending on nobles, and a sharp temperament lead to black bilious matter which is the cause of the disorder. This black bile then is noxious as it produces an illness. One cannot again decide whether the burnt blood is identical to black bile.

In case no. 2 there is the only reference to the presence of black bile in the body. It is called a surplus of black bile that reached the head and found dry burnt humours in it that changed to black bile. This is further evidence of black bile being both congenital and non-congenital.

In the fourth and the fifth cases there is no mention of the

¹⁴⁷ R.-D., fragment no. 70, p.357, 19.

¹⁴⁸ Ibid., p. 356, 19-20.

¹⁴⁹ See the section on psychology.

cause but the presence of the black bile is indicated in evacuation only in no.5.

Black bile in Rufus' writings is both congenital and non-congenital. There is evidence that both of them can produce illness. When the first one is stirred up, then the disease can occur, while the second, which can have both materialistic and non-materialistic causes, leads to the same result. It does not affect the body in only melancholy but also in the form of other disorders. In such disorders phlegm indicates its presence alongside that of black bile.¹⁵⁰

Conclusion:

Humours have a long history in Greek medicine. As a Greek physician with strong affinities with the Hippocratic medicine Rufus has paid humours his close attention. The nature of his surviving writings and fragments have limited our ability of drawing a rich picture of Rufus' humoral doctrine. Nevertheless they have been adequate to give us some information on how Rufus thought of the relationship between

¹⁵⁰ Klibansky paraphrases Rufus' ideas as thus : " black bile was understood as one of the four humours always present in the body- essentially nothing but a thick and cold residuum of the blood, and (as such) still tainted with the stigma of dross and dregs, capable of generating illness, even if it was not actually harmful in a small quantity (in such a matter Rufus is different for he believes that not out of the abundance but in respect of some form of separation black bile produces illness). And secondly, under melancholia adusta or incensa they understood diseased black bile, which (as such) did not belong to the four humours but arose from "superassatio" , "combustio", or whatever expressions were later used, of the yellow bile; it therefore not only always caused illness, even when present in the smallest quantity, but owed its very existence to a process of corruption. This laid the foundations of the medical theory of melancholy". Klibansky, op. cit., p. 53

humours and food, the place of the production of humours in the human body, the routes humours take and more significantly the role of humours in illness. For the distinctive relationship between black bile and melancholy I have devoted a part of this chapter for studying that specific humour. Yet this study has shown that Rufus links black bile with other diseases. In general it is clear that Rufus blames humours, as an internal force, for several disturbances in the human body. In the following sections I shall be studying the influence of more of the internal factors and more specifically their relationship with humours.

Pathological anatomy is the next factor which will shed more light on Rufus' ideas of disease causation.

II Anatomy

Rufus is one of the very few sources for the anatomical knowledge of pre-Galenic times, particularly in his anatomical works On the Naming of the Parts of the Human Body, On the Anatomy of the Human Body, and On Bones. Moreover the introduction to his work On the Naming of the Parts of the Human Body reflects, besides Rufus' awareness of the anatomical teaching and the achievements of the past, his own concern with the deterioration of such teaching in his own time. ✓

It is of our concern to show here that Rufus' interest in anatomy crossed the boundary of writing specifically on the

human anatomy to employ this knowledge for the sake of explaining some symptoms, some diseases or even his preference for some methods of treatment over others. We have already seen Rufus drawing from the anatomical knowledge to explain why women are more likely to contract lithiasis than men. However Rufus, in this specific point, is not original for he is much influenced by Hippocrates who almost gave the same anatomical explanation.¹⁵¹

In the Medical Collections of Oribasius there is a long fragment with Rufus' lemma which deals specifically with the cathartics and their proper materia medica.¹⁵² In this fragment Rufus uses his anatomical knowledge to explain why he sometimes prefers emetics to purgatives. He says in the case of those who have the orifice of the stomach more inclined upwards or narrower than the normal, because of natural or pathological considerations, one has to avoid prescribing purgatives.¹⁵³

It is notable that Rufus starts with a description of the normal state of the organ, then of the abnormal, either congenital or non-congenital, to denote the importance of such knowledge for the doctor's choice of the best method of treatment.¹⁵⁴ It is equally interesting to note that Rufus

¹⁵¹ See the section on water in Chapter two.

¹⁵² Oribasius, Coll. Med., VII, 26.

¹⁵³ Ibid., p. 99, 21.

¹⁵⁴ In On the Naming of the Parts of the Human Body Rufus describes the stomach as situated under the diaphragm, followed by the first part of the intestines. R.-D., pp. 156-7, 169-170. In On the Anatomy of the Human Body he adds : it begins after the end of the oesophagus. It lies in the middle

gives a list of symptoms by which one can tell the congenital and non-congenital states of this disorder.¹⁵⁵

Moreover Rufus does not prefer purgatives for those who do not have a big orifice of the caecum either pathologically or non-pathologically. He describes the intestines, along with a list of symptoms of the congenital and non-congenital states of the disorder.¹⁵⁶

If one turns to diagnosis one finds Rufus saying that when the orifice of the colon does not let the food through, there are pains at the right flank. For at this point the colon begins to extend to the left under the omphalos, where it turns and hides under the fine intestines.¹⁵⁷

Anatomical knowledge, as we have seen, can justify a treatment or help in diagnosis. It can also explain the occurrence of an ailment. Among the causes Rufus holds

of the diaphragm, rather leaning to the left. Its cavity extends from the narrowness of the oesophagus to the width. Its convex part leads outwards to epigastrion while the concave to the spine. It is much more nervous than the oesophagus and wider (broader). The interior surface is not so rough. It extends when it receives food and contracts when it sends it. R.-D., pp. 178-9, 40.

In the fragment, he describes the orifice of the stomach as inclining to the right towards the spine. The human stomach is wider than that of animals. It ends narrow and hides under the mesentery until the beginning of the colon. Orib., Coll. Med., VII, 26, pp. 98-9, 20.

¹⁵⁵ Ibid., pp. 99-100, 22-23.

¹⁵⁶ He says that the intestines begin wide then decrease in size especially at the left side where the space is taken by the spleen. He also describes the intestinal caecum as beginning wide in the right flank and getting narrow until it ends blind (closed). Orib., Coll. Med. VII, p. 100, 24-25; p. 101, 26-7. For his description of the intestines in his anatomical works see R.-D., p. 157, 169-175; p. 179-181, 41-51.

¹⁵⁷ Orib., Coll. Med., VII, 26, p. 101-2, 28.

responsible for amenorrhoea is the case of the so-called atresia.¹⁵⁸ He says:

Τισί δὲ ἐξ ἀρχῆς ἐπίφυστος ὑμένας
περὶ τὸν τράχηλον τῆς ὑστέρας ἢ τὸ στόμα γέγονεν, ὡς ἐστὶ
τῶν ἀτρήτων λεγομένων, ἃς ἀδύνατον καθαρθῆναι εἰ μὴ οἱ
ἐμφραττοντες τοὺς τόπους ὑμένας τρηθῆεν.

Within them arises a congenital membrane at the neck of the uterus or at its mouth, as since it is called imperforation. They are unable to discharge unless the hymens that block the ways are perforated.¹⁵⁹

Rufus, in this passage, blames the presence of some congenital membrane for amenorrhoea. The case is called atresia. The only treatment needed for this case is the hymen's perforation. The Hippocratics have not identified atresia as a cause of amenorrhoea.¹⁶⁰ In other words they have not considered any

¹⁵⁸ Though Fasbender judges Rufus' remarks in gynaecology and obstetrics as insignificant and denies that he comes into consideration in matters of practical obstetrics (Heinrich Fasbender, Entwicklungslehre, Geburtshülfe, und Gynäcologie in den Hipp. Schriften, (Stuttgart, 1897), pp. 15-16; Idem, Geschichte der Geburtshülfe, (Jena, Gustaf Fischer, 1906), pp. 33-4) he acknowledges his pioneering anatomical terms. He says that Rufus was the first to distinguish the vagina from the uterus, and that, before Galen, he corrected Herophilus' ideas of the seminal vessels. Ibid., p. 33. According to Diepgen Rufus was the first to use the term clitoris ^{Κλειτορίς} while Soranus and Galen preferred nymph. Paul Diepgen, Die Frauenheilkunde der alten Welt, (München, J.F.Bergmann, 1937), p. 130.

¹⁵⁹ Aetius of Amida, XVI, chap. 50. Aetius attributes the chapter to Rufus and Aspasia. One has to note that in the Arabic fragment that appears in Ibn al-Jazzār there is no mention whatsoever of such a hymen or a similar causation of the case. One might explain the silence by pointing at the nature of the transmission from Greek into Arabic and the excerptors' preference of some information to others. Cf. Ibn al-Jazzār, Zād al-musāfir wa qūt al-Hadīr, Bodleian I 559 (=Hunt. 302), Dresden E a 209. For a Greek fragment of ibn al-Jazzār's work see Giovanni Mercati, in: Studi e Testi 31, Roma 1917, p. 38. For a wider discussion of amenorrhoea in Rufus' writings and fragments see the following section.

¹⁶⁰ Fasbender lists the causes of amenorrhoea, among which

membrane responsible for the retention of the menstrual discharge.¹⁶¹ They understand amenorrhoea as basically due to either the movement of the womb or the closure of the orifice.¹⁶² Soranus, on the other hand, has included atresia among the causes of amenorrhoea.¹⁶³ He maintains that a hymen or flesh is responsible for the case.¹⁶⁴ It is treated by perforation. Yet, while Rufus places the membrane that is responsible for the case at the neck of the uterus or at its orifice, Soranus does not specify a place for it at all.¹⁶⁵

no mention of any hymen is listed. Fasbender, Geburtshülfe, p.227.

¹⁶¹ Fasbender refutes the opinion that amenorrhoea hymenaica was known to the Hippocratics. Fasbender, Geburtshülfe, pp. 78-9. Diepgen says that whether the Hippocratics know it or not is problematic. Diepgen, op.cit., p. 130. Helen King, in her paper "Bound to bleed", raises the possibility of the existence of a virginal membrane that blocks the way for menarche.

¹⁶² Ibid., p. 116; as well as a correspondence. L. Dean-Jones adds the way that blood takes may lead to either depletion or suppression. Lesley Dean-Jones, "Menstrual Bleeding according to the Hippocratics and Aristotle" in Transactions of the American Philological Association 119, 1989, p. 184.

¹⁶³ Soranus and Rufus introduce the case with the term the so-called. Lloyd explains the use of the so-called term in the H.C. as either a deliberate introduction in the medical terminology (Lloyd cautions the reader that Homer uses a similar expression to introduce rare anatomical terms), or, in works addressed to the lay, a term which is not used in its common senses or to indicate developments in the anatomical terms while in some of the Hippocratic works the use of this expression is to indicate rare terms even for the more specialized audience. Lloyd, Science, Folklore and Ideology, Cambridge, 1986, pp. 154-157.

¹⁶⁴ While Rufus does not mention such a membrane in his anatomical works Soranus, on the other hand, in his gynaecological writings, refrains from alluding to any membrane except those that enclose the uterus itself.

¹⁶⁵ It is hard to explain Rufus' indifference to a specific location of the membrane.

One can understand his reasons for not locating such a hymen if one reads his attack on those who assume that there is a hymen which grows across the vagina and divides it. He denies that the presence of that alleged hymen could be responsible for pains of defloration, or for the too swift occurrence of menstruation or, finally, that by remaining and becoming a body, it causes atresia. Soranus' reasons are : first, the hymen is not found in dissection. Second, the probe does not meet with any resistance in virgins. Third, if it bursts in menstruation and causes pain, it should not then cause any in defloration. Fourth, this membrane should have a specific place, which it does not as we see in the case of atresia.¹⁶⁶ Soranus' denial of the link between a specific hymen with atresia may lead us to assume that: first, the hymen or the flesh he holds responsible are not congenital. For if it is congenital it should have a specific place. This interpretation is reinforced by his saying that a membrane grows in widowhood.¹⁶⁷ Besides Soranus has not added the two words *ἐξ ἀρχῆς* which appear in Rufus' account to indicate its congeniality. This point distinguishes Rufus from Soranus. But if the membrane mentioned by Rufus is congenital, it should then lead not to amenorrhoea but to late menarche. The last point needs further examination.

¹⁶⁶ According to Soranus it is found sometimes in the accessible parts of the Labia, sometimes in the middle of the (vagina) genitals, and at other times in the middle of the orifice of the uterus. Soranus, I, 17. (Temkin's translation).

¹⁶⁷ Soranus mentions that the closure of the orifice of the uterus can happen due to a long widowhood. III, 7.

Modern scholars are divided among each other on whether the Greeks knew of a virginal hymen. One of the recent studies which addresses this problem is Sissa's book Greek Virginty.¹⁶⁸ Sissa denies that the Greeks had such a knowledge while Ann Ellis Hanson takes the other side and suggests that the Greeks thought of the virgin as a sealed body open first for menstruation. The value of Rufus' opinion is that it suggests that the Greeks knew of a congenital membrane responsible for such a case of blood retention which could be well interpreted as late menarche. It is probable to suggest that Rufus means here that all the girls have such a membrane. This might differentiate Rufus from Caelius Aurelianus who also discusses the case of atresia and explains it, among other things, with the existence of a congenital membrane which also does not have a specific place. For Sissa correctly interprets such a passage to mean that some girls are unfortunate enough to have a congenital membrane and experience blood retention.¹⁶⁹ Yet by admitting the non-generality of existence of the membrane she admits the ancients' knowledge of it.

One may conclude that first : the case mentioned by Rufus

¹⁶⁸ Giulia Sissa, Greek virginty, translated by Arthur Goldhammer, Harvard University Press, 1990.

¹⁶⁹ Caelius Aurelianus' work Gynaecia edited by the Drabkins, is a compilation (or compilations) made of the text of Caelius Aurelianus (which is a version of Soranus' text) and Mustio's text which is also a version of Soranus' text. Cf. Caelius Aurelianus Gynaecia : Fragments of a latin version of Soranus' Gynaecia from a thirteenth century manuscript, edited by Miriam F. Drabkin and Israel E. Drabkin, Baltimore, The Johns Hopkins Press, 1951, p.xii. For the relevant section of atresia see *ibid*, pp. 118-120; Giulia Sissa, *op.cit.*, p. 115.

was not one of amenorrhoea but of delayed menarche, in spite the fact the section is devoted to amenorrhoea and not to the cases that prevent menarche. Second, Rufus is the first surviving author to blame such a congenital female membrane for the case.¹⁷⁰ Third, Soranus' attack may permit us to assume that Rufus was among those whom Soranus meant when he strongly attacked belief in such a membrane.¹⁷¹ But whether the Greeks knew a virginal membrane is still problematic.

In the following section I shall be discussing the influence of mind affliction on the human body and I shall be dealing with more of the causes of amenorrhoea.

¹⁷⁰ Sissa maintains that the gynaecologists of the Classical Period did not know a normal form of atresia in virgins. She also says that when Aristotle mentions the anomaly of a closed orifice of uterus he means that this congenital obstruction is abnormal which must be opened with an incision. Sissa, op.cit., p. 115.

Diepgen says that in late antiquity congenital atresia became known and was distinguished from the non-congenital one. One of the non-congenital cases is the presence of some fleshy or thick membrane which directs the menstrual discharge to the same channel as the urine. Diepgen, op.cit., p.217. It seems that Diepgen who built his judgement on Mustio's text which was influenced by Soranus, as Diepgen himself declares, did not know of Rufus' text.

¹⁷¹ Sissa suggests that " Soranus' summation is directed at relatively competent readers familiar with medical knowledge or at any rate with medical practice, because it denies not only that a vaginal hymen exists but also that it is subject to a particular form of degeneration." Sissa, op. cit., p.114.

III Psychology

Introduction

Rufus' works and fragments contain a peculiar explanation of illness. This explanation is not corporeal, and cannot be detected by corporeal measures. Yet its significance in etiology is great. This is psychology, or in other words, mental affliction. The concern with the effect of the state of mind on the body and its different manifestations was something already known, not only in the realm of medicine, but also in drama as well as in philosophy, and last but not least in folklore and religion. As for medicine, we have Hippocrates, who, according to Heidel, paid spread attention to the state of the patient's mind.¹⁷² Yet, as Lain Entralgo puts it, " Now, the Hippocratic, for whom, as we know, the great influence of the soul on the health and sickness of man was no secret, neither applies his vigorous etiological mentality to the investigation of the possible psychic reason for the disturbance nor hits upon the idea of utilizing a psychic, psychotherapeutical treatment, in order to restore the unsettled psychic order".¹⁷³ This judgement is very

¹⁷² Heidel, Hippocratic Medicine, p. 129.

¹⁷³ P. Lain Entralgo, The Therapy of the Word in Classical Antiquity, trans. L.J. Rather & J. M. Sharp, New Haven, 1970, p. 168. Bennett Simon cites a passage from the Hippocratic work On Internal Diseases to give an example of the accounts of disturbed mental life in the Hippocratic corpus and to point out, among other things, that no emotional etiology is given to the case. Cf. B. Simon, Mind and Madness in Ancient Greece, Ithaca and London, 1978, p. 219.

important in our account, for it helps to focus on the value of Rufus' awareness of the role that mental affliction plays in relation with two specific disorders: the first is a bodily disorder (amenorrhoea) while the second is, so to speak, psychosomatic (melancholy). The importance of assessing Rufus' appreciation of the psychic element in illness is also great when one finds in Galen its canonization of the so-called six non-naturals, and when Galen makes strong claims for independence in the treatment of mental disorder. While he greatly acknowledges a basis in the Hippocratic writings, he also accuses his contemporaries, and, by implication, his predecessors, of ignorance of these fundamental doctrines. Although he often expresses agnosticism on the nature of "soul", he also puts forward physical interpretation of mind, and claims Hippocratic precedent for it. Hence Rufus' interpretation of the relationship between mind and body cannot only throw light on his own practice, but serve as a check on Galen and on his interpretation of the Hippocratic tradition. Our account is therefore dedicated to investigating what sort of mental afflictions affect the body in relation to these two disorders, as well as to searching for other authorities who might have paid some sort of attention to the important causal factor of psychology. I shall also pay attention to psychic symptoms, by which I mean the non-bodily manifestations of the disease such as fear, anxiety, etc. Yet, the emphasis will be on Rufus' realization of the effect of the soul on the body in its clearest way i.e. etiology, as a cause of illness.

Amenorrhoea

Among the surviving Greek and Arabic fragments of Rufus there is a considerable amount of works which can be called gynaecology, obstetrics and paediatrics. We have for instance titles such as " On the diet of young girls ", " On conception ", " On diet of women ", " On signs of conception and its diet", " On the rearing of children ", " On choosing the nurse ", " On nourishment ", " On bringing up children ", " On children's efflorescence", "On thrush of children " ¹⁷⁴ and finally " On retention of menses".¹⁷⁵

Rufus' interest in gynaecology in particular enhances his importance among the ancient Greek physicians and reinforces our understanding of Antiquity interest in the subject. We have Hippocratic treatises which deal specifically with women's diseases such as On the nature of women, On sterile

¹⁷⁴ Cf. Oribasius, Coll. Med., lib. inc. 2, 3, 4, 6, 12, 13, 14, 20, 24 (42), 25 (43). Ullmann has proved Rufus' authorship of at least some parts of the chapters 4, 24 and 25 by comparing it with the Arabic version which is attributed to Rufus. Cf. Manfred Ullmann, " Die Schrift des Rufus " De infantium curatione" und das Problem der Autorenlemmata in den " Collectiones Medicae" des Oribasios " in Medizin historisches Journal, 1975, pp. 173-179; 188. For the Arabic fragments cf. al-Baladī, K. Tadbīr al-Habāla wa al-atfāl, Maq.II bab 38, 39, 44; Maq.III, bāb 1, 17, 20, 22, 23, 27, 30, 32, 47, 48, 51, 52, 55. Cf; also ar-Rāzī, III, pp.55, 201; VII, pp. 6, 273; XIX, p. 372 and, though it does not have the mentioned titles, ar-Rāzī, III, pp. 196, 199; IX pp. 96, 110, 136, 145; X, p. 291.

¹⁷⁵ Cf. Aetius of Amida, XVI, chapters 50, 51. Chapter 50 has the lemmata of Rufus as well as of Aspasia while chapter 51 which discusses treatment has only Rufus' signature. For the Arabic fragments cf. Ibn al-Jazzār, Zād al-musafir wa gūt al-Hadīr. Bodleian I 559 (=Hunt. 302) fol. 159 ff.; Dresden E a 209,1, fol.225 r 12 ff. For a Greek version of this Arabic work see Giovanni Mercati in: Studi e Testi 31, Rome 1917, p. 38.

female etc., Rufus seems to carry on that interest. It is true that Hippocrates has handled the subject of the stoppage of menstruation (amenorrhoea) from the perspective of the effect of some diseases on the menses, yet the first authority, though survives only in fragments in Greek and Arabic ¹⁷⁶, who deals specifically with it is Rufus.¹⁷⁷ In a fragment Rufus deals with the reasons behind its stoppage and prescribes a treatment only for one of its various causes. It is better to give first a survey of Rufus' ideas of the causes of the retention of the menses.

Rufus considers age as a decisive factor for the menses.¹⁷⁸ In his opinion those women who are sterile, pregnant, singers, gymnasts, who are over-heated by natural

¹⁷⁶ Ibn an-Nadīm and Ibn abi Usaibi give in their lists of Rufus' works the following title " On the retention of menstruation ". Whether this title belongs to a greater work or a separate pamphlet we do not know.

¹⁷⁷ Soranus, later on, has shown some interest in that specific subject. He gives us useful information in his work Gynaecology.

¹⁷⁸ Rufus believes that 14 is the age for the start of the menses while 50 is the age of its final absence. The aim of his surviving fragment that deals with the diet of young girls is to prescribe a certain diet for girls before puberty in order not to accelerate the puberty nor cause them to contract disease. His major aim is to cooperate with nature. Cf. Orib., Coll. Med., lib. inc. 2, p. 83.

Aristotle (585 b) believes that menopause is at 40 while in some women at 50. Pliny (VII, chap. XIV) thinks that it stops at 40 while they stop to bear children at 50. Soranus (I, 20) believes that it does not start till 14 and stops not before 40 and not later than 50, while in some women it can last till 60. Gourevitch adds these references. Galen says that menarche occurs at 12 or 13 or 14 or 15 or 25 for the epileptics while Aetius says that it occurs at 14. Gourevitch, Le mal d'être femme, p. 84. Hippocrates and Aristotle maintain that menopause occurs at forty or fifty. Ibid., p. 89.

crasis or by excessive exercises, who are mannish ¹⁷⁹, melancholic, sluggish, too fat ¹⁸⁰ or too thin do not menstruate. Those who have particular physical characteristics such as thin hips and buttocks while big shoulders and chest do not menstruate or little. Those women who are hotter by over exercises or rustic (working in the field) works do not menstruate sufficiently. Also when the blood goes to a different direction as in haemorrhoids, expectoration, nasal bleeding, or in a great amount of sweating, frequent vomiting, abundant purulent diarrhoea and all skin florescence retain the catharsis.¹⁸¹ Also when blood becomes thick or gluey.¹⁸² The presence of a congenital hymen, as well as diseases that occur to both uterus and body, impede the egress of the

¹⁷⁹ Soranus believes that it is natural for women who are involved in singing contests or of masculine type not to menstruate. I, 22-23; III, 7.

¹⁸⁰ Rufus believes that fat women do not conceive because their blood is being used to produce fat. Even if they conceive they give birth to weak babies. See also ar-Razi, IX, p. 96. For a very similar view cf. Aristotle 746 b 20-747 a 2.

¹⁸¹ The Arabic fragment of Ibn al-Jazzār adds that rupture of a vein directs the blood into a different direction and impedes the catharsis. We find the link between the retention and the passage that blood takes in Hippocrates. Yet Hippocrates considers it a good sign when the menses are retained blood takes a different direction (Aphorisms, V, 33). In other words he does not blame it on that alternative passage. Aristotle and Celsus put in a different formula. Aristotle (727 a 12-16) remarks that women are not troubled by haemorrhoids or nasal haemorrhage unless the menses are retained. Celsus (IV, 11) says that in women whose blood does not go out through menses expectorate blood. Galen (XI, p. 204) gives the impression that expectoration is likely to happen during the menses while Rufus considers it an impedimentum to menses.

¹⁸² Ibn al-Jazzār adds that when the matter is also excessively cold or dry the menses are retained.

menstrual fluid.¹⁸³ Certain kinds of food as well as its quantity also affect the menses considerably. Last but not least mental afflictions can act upon the body to retain the blood.

What is of great interest to us is the effect of the state of mind on the body and specifically on menses. Rufus maintains that constant sadness, constant worry and the similar mental states such as anger, and fear cause the menses to be retained. In arguing for this, Rufus seems the earliest surviving authority to link mental afflictions with suppression of menses. The only authority that shares with Rufus the interest in the effect of mind on the menses is Soranus, yet he does not include this among his causes for amenorrhoea.¹⁸⁴ He only says that in the process of the treatment when the therapy seems to fail, the doctor has to try and relax the patient's mind. Rufus, unfortunately, does not talk about therapy of that type of patient. His treatment is devoted to those who are over-heated. Despite Soranus' interest in the state of the soul, his silence about causation marks him off from Rufus.

Melancholy

The second disease through which one can clearly see

¹⁸³ For a discussion of the influence of the presence of a congenital membrane on the menses see the section on anatomy.

¹⁸⁴ It is not surprising to find Soranus the Methodist ignoring completely the effect of the matter (blood) on the retention, when it becomes thick or gluey.

Rufus' idea of the influence of the soul on the body is melancholy. Rufus' concern with its cause, manifestations, and therapy is interesting. Such a concern has won him the commendation of the Greek doctor who is the most niggardly in giving praise i.e. Galen. Galen describes Rufus' tract in these words " of the moderns the best that is written on melancholy is thus by Rufus of Ephesus".¹⁸⁵ He explains this by saying that if one reads it naturally and not, like the Erasistrateans, Asclepiadeans, and the Methodists with the aim of deliberate captious criticism, then Rufus will seem to have included everything.¹⁸⁶ As it is clear from Galen's eulogy, Rufus was not the first doctor to be interested in melancholy. The Hippocratic writings paid some attention to the disease.¹⁸⁷ Diocles of Carystus; the Stoics (Posidonius, Cicero and Seneca); and Celsus, all discussed the disease in their writings. Above all we have the pseudo-Aristotelian tract on melancholy. The accounts of Caelius Aurelianus who expresses Soranus' and the Methodist school's views ¹⁸⁸; of

¹⁸⁵ R.-D., p. 291= Galen, V, p. 105.

¹⁸⁶ Ibid.

¹⁸⁷ Simon says of the Hippocratic writings : " The Hippocratic writings contain many brief references to melancholy but no single extended discussion. We learn more about melancholy from the medical writers of later antiquity, who in their commentaries and encyclopedias tell us much about the conceptions held in the fifth and fourth centuries B.C." B. Simon, Mind and Madness in Ancient Greece, p. 228.

¹⁸⁸ Flashar analyses Soranus' account of the disease as it shows that humoral doctrine is no longer the basis, yet the derivation of melancholy from pure psychological reasons was only given a little space. Moreover in therapy psychological measures were given the second place. Flashar, Melancholie und Melancholiker, p. 83.

Archigenes as well as of Aretaeus of Cappadocia have survived. Despite all these authorities who worked on the disease, Rufus was the only one to win not only the eulogy of Galen but also of the Arabs. One cannot argue from silence whether these major authorities were known to the Arabs in order to accept their judgement of Rufus. Yet it is enough to notice that the well-known Arabic writer Ishaq ibn Imran knew Galen's work and considered Rufus' even better.¹⁸⁹ ar-Razi who preserved to us some of Rufus' tract expresses his astonishment at Galen's failure to inform the reader of one of the points in Rufus' tract.¹⁹⁰ Unfortunately we have lost this treatise except for some fragments preserved in the works of Aetius of Amida ¹⁹¹, ar-Rāzī ¹⁹², Iṣḥāq ibn 'Imrān ¹⁹³, al-Kashkarī ¹⁹⁴, al-Qumrī ¹⁹⁵

¹⁸⁹ Flashar belittles Iṣḥāq ibn 'Imrān's judgement by saying that it is an imitation of Galen's statement of Rufus. cf. Flashar, op. cit., p. 89. Ishaq builds his judgement on the fact that Rufus has assigned a separate work, composed of two books, on the disease, something Galen has not done. It is surprising that Flashar acknowledges Rufus' advantage (p. 84) and denies the acknowledgment to Ishaq. Besides, Iṣḥāq cites some Greek authorities (Hippocrates, Galen) which shows a wide knowledge that justifies his judgement.

¹⁹⁰ Ibn Abi Uṣaibi'a describes Rufus' treatise as " one of his greatest works ". Ibn abi Uṣaibi'a, 'Uyūn al-anbā', I, p.33. The same description is rendered by Hajji Khalifa. Hajji Khalifa, Kashf az-zunūn, vol. II, p. 1455. It is notable that Ibn abi Uṣaibi'a gives the title in a transliterated form while Ibn an-Nadīm gives its translated in Arabic " On Black Humour ". Ibn an-Nadīm, al-Fihrist, p.405.

¹⁹¹ R.-D., fragments nos. 70-72.

¹⁹² Cf. Ullmann, Die Medizin im Islam, p.73.

¹⁹³ Iṣḥāq ibn 'Imrān was an Arabic physician from the late ninth century and the beginning of the tenth. He is well-known for his book on melancholy, composed of two books. He cites Rufus in his work six times. We have also Constantine of Africa's account on melancholy which is believed to be simply a latin version of Iṣḥāq's book. Yet Flashar points at four other fragments of Rufus in Constantine's work which are not

and Ibn Sina.¹⁹⁶ Moreover there is an Arabic work known by its German title Krankenjournal which is attributed to Rufus, in which one can find five cases dealing specifically with melancholy. Our aim here is to examine the relationship between the body and the soul by looking at both causation and symptoms of melancholy.

I start with causation. Needless to say, that Rufus considers the cause of the disease is humoral, a point which we have already discussed in this chapter. Yet, Rufus has clearly also shown some interest in other kinds of causation which he has linked with humoral causation. In the second case of Kj, the patient was suffering from grief and sleeplessness -due to some ailment- which burnt his humours. A black bile later on acted upon those burnt humours and hence generated melancholy. Rufus' method to counteract such a disease was to alleviate the grief and hence to keep the humours safe from its malignant influence so that the body would regain its previous health. Rufus, though, had not treated the third case, he had noticed that the effect of the patient's long

included in Ishāq's. Cf. Flashar, op.cit., p. 91. for an edition of Ishāq' and Constantine's works see Karl Garbers, Ishāq ibn 'Imrān und Constantini Africani libri duo De Melancholia, Hamburg, 1977.

¹⁹⁴ Ya'qūb al-Kashkarī was a physician from the tenth century. Cf. Ya qub al-Kashkarī, Kunāsh fī al-tibb, pp.260-261. I owe the knowledge of this work to Dr. Larry Conrad.

¹⁹⁵ Ghinā wa Munā, Ms. Br.library, 5721, fol. 19 a ff. It is worth noting that neither Ullmann nor Sezgin has mentioned this work.

¹⁹⁶ Ibn Sīnā, in his famous work al-Qanūn fī at-tibb (K.III, f.I, trac. IV), cites Rufus' melancholy only once where the latter speaks of the effect of the heat of the liver and the stomach (intestines) on the production of melancholy.

studying in geometry, sitting with the nobles ¹⁹⁷, his old age as well as his sharp temper when he was young on the humours (burning the blood) and then on the body by developing melancholy. The fourth case shows the effect of fear which is one of the activities of the soul on the body. The patient developed melancholy as a result of being scared that he was about to drown. The treatment shows the link with humours as evacuating the black bile was recommended. Yet as in the second case this type of treatment has to be supported with diet as well as with relaxation. The fifth case, which is very brief, reflects the influence of asceticism on the body. The patient had before a quartan fever which turned to melancholy. He was an ascetic and given to prolonged fasting. Rufus managed to cure him. Although Rufus does not link it himself with psychology yet one can see that asceticism as an activity of the soul can be linked with the disease.

Krankenjournale has provided us with a clear link between humours and the various activities of the soul. Rufus' surviving fragments apud ar-Rāzī does not contain a variety of the effects of the soul on the body. Rufus, according to ar-Razi, believes that excessive thinking and cares (worry) lead to melancholy.¹⁹⁸ He clearly announces that good natured

¹⁹⁷ The Arabic word is mulūk which as Ullmann says in his commentaries denotes nobles, lords and princes. Ullmann, Krankenjournale, p. 120. Nutton suggests that the original Greek word is $\sigma\alpha\lambda\alpha\gamma\iota\varsigma$. Cf. Nutton, " The patient's choice: A new treatise by Galen" in Classical Quarterly 40 (i) 1990, p. 253, f. n. 73.

¹⁹⁸ ar-Rāzī, I, p. 75. Rosenthal translates it incorrectly thus : " Melancholia produces much thought and worry ". Rosenthal, p. 199. Franz Rosenthal, The classical heritage of Islam, translated from the German by Emile and Jenny

people are prone to melancholy for the good natured move swiftly and think a lot. Nevertheless, despite his extensive discussion of black humours in those fragments, one cannot perceive an extensive discussion of the nature of the link between humours and the activities of the soul or mind.¹⁹⁹

The pathological effect of thinking and long studying in producing the disease was apparently first introduced into the medical circles by Rufus. Aristotle had linked the genius of poets, politicians, artists and philosophers with melancholy, but he did not consider the disease a curse for it was a mark of the genius. On the other hand, Rufus disconnected the happy relation between the genius and his illness by putting the production of the disease as a dangerous consequence of the noble activities of the soul. He did not, as Aristotle did, describe such noble qualities in humoral terms. Nor did he explain how exactly thinking takes place, yet the thought-process is used to explain the occurrence of illness. Moreover Rufus presents melancholy as a destiny awaiting those good natured people who think a lot and move swiftly.²⁰⁰ It is

Marmorstein, University of California Press, 1975.

¹⁹⁹ ar-Rāzī, I, p. 77.

²⁰⁰ Klibansky has compared Rufus' attitude with both pseudo-Aristotle's account Problems and the Stoic view. He considers Rufus' position as approaching the Stoic. He says that in Problems the intellectual pre-eminence was a direct consequence of the natural faculty while to the Stoics it was merely a predisposition to pathological melancholy, but for Rufus activity of the mind became the direct cause of melancholy. Cf. Klibansky, op.cit., pp. 49-50. I disagree with him in implicitly attributing to Rufus the view that the effect of studying is seen in the spleen of the overworked philosopher. Rufus has not mentioned any relation between the spleen and thinking.

interesting to notice that the Arabic philosopher Miskawaih has used Rufus' statement on melancholy in his work only to defend thinking by limiting the meaning of Rufus' statement to invalid and incorrect thinking. His motive is to defend the study of philosophy.²⁰¹

Our basic concern is causation, yet studying the psychic as well as the somatic manifestations of the disease is enlightening about the nature of the disease itself, the relation between the body and the soul and also about Rufus' distinction as a doctor.

Ishāq ibn 'Imrān declares that Rufus has given the symptoms of melancholy in abundant detail.²⁰² Yet Rufus, according to the Arabic writer, has not said every thing for, the writer explains, it is difficult to recognize the illness of the soul.²⁰³ Aetius' fragment shares with the Arabic

²⁰¹ Miskawaih, Maqala fī an-nafs wa-l-ʿaql, ed. Mohammed Arkoun, in : BEO 17, 1961-62. For a study of this philosophical treatise see chapter six.

²⁰² Pigeaud believes that Soranus, Aretaeus and Galen owe their descriptions to Rufus. Cf. Pigeaud, op. cit., p. 131; Flashar, op. cit., p. 99.

²⁰³ Ishāq Ibn 'Imrān, fol 96 a 15. Ullmann gives a very peculiar opinion of the psychogenic explanation of Ishaq. He believes that it does not fit in the humoral system by which Ishaq interprets the occurrence of the disease. He assumes two sources of this explanation either the every day life experience of Ishaq as a doctor or Aretaeus of Cappadocia, according to Ullmann, who had already introduced the psychogenic explanation. Cf. Ullmann, Islamic medicine, p. 76. Ullmann is mistaken in his interpretation for the following reasons: First, the psychogenic explanation fits very well in the system. Second, it is not Aretaeus who introduced it, we find, besides in Rufus, in Cicero (Tusculan disputations, III. v.11) great anger, fear and pain as causes for melancholy at the same level as black bile. And in Caelius Aurelianus (Chronic diseases I, VI) grief and fear are among the causes. (Flashar considers the purpose of Caelius' mention of Cicero, Virgil and Homer is not for the sake of basing his argument on

fragment the announcement of the impossibility of telling all the symptoms of each case because of the difficulties in explaining some of them.²⁰⁴ This introduction proclaims the richness of its writer's experience and knowledge which enabled him to be versed in the varieties of melancholy's symptoms. The so-called Krankenjournale which is attributable to Rufus provides us with five cases which consolidate the belief in Rufus' knowledge and experience.

First it is striking that while there are plenty of psychic symptoms in the surviving fragments of Rufus apud ar-Rāzī, there is no explanation given to those symptoms not even humoral. On the other hand, the psychic symptoms mentioned by Aetius, though fewer, are explained in humoral and generally materialistic terms.²⁰⁵ I start with Aetius' fragment. It is due to the over-heated bile that people turn to delirium, become more rash ²⁰⁶, more passionate, violent and commit terrible things. When the bile is quenched they become dejected, grieved and frightened.²⁰⁷ It is also because of

psychic reasons but for denying the name of the disease. cf. Flashar, p. 83. I disagree with Flashar for the appreciation of the influence of psychology on the body is noticeable regardless of the its rank among the various causes.) However Rufus' clinical experience had no doubt a distinctive influence on his works.

²⁰⁴ R.-D., fragment no.70. Flashar attributes the introduction of the Greek fragment where the author declares the impossibility of telling causes of every symptom to Aetius, while the following enumeration of symptoms is that of Rufus. Flashar, op.cit., p. 86.

²⁰⁵ R.-D., frg. 70, pp. 354-358.

²⁰⁶ Cf. also Medical Questions, p. 26,4.

²⁰⁷ R.-D., frg. 70, p. 358, 20-21.

the dryness and the coldness of the black humour that some think of themselves as pots while the lightness of the air which is ascending in the head makes some think they are headless.²⁰⁸ They crave food because the orifice of the stomach is cold while they crave wine because they need the heat.

The symptoms mentioned by ar-Rāzī are classified into preliminary and actual. The preliminary symptoms are the following : fear, anxiety, and suspicion in one thing while patients exhibit normal behaviour and feelings.²⁰⁹ They hallucinate. Some are scared of thunder, or fond of mentioning death or bathing. Some hate a kind of food or drink or animals. Some imagine that they have swallowed a snake or something similar. They like to be alone and excluded from people without a known need or cause. They are quick to display anger, sadness (sorrow), and anxiety. Some of them may become fond of dreams and foretelling the future, in which they are correct.²¹⁰ The mentioned symptoms last for a while then become stronger, then the symptoms of melancholy appear

²⁰⁸ Ishāq mentions a case where the patient from Kairawan imagined himself without a head. Ishaq treated him by fixing him a (hat) made of lead over his head. He says that Rufus actually mentioned the same treatment earlier. Cf. Ishāq, fol. 98 b 12. Modern scholars point at the re-appearance of this story in later writers' accounts. See Klibansky f. n. 133, p. 50; Karl Garbers, op. cit., f. n. 4, p. 27.

²⁰⁹ Pigeaud, using the latin frags in R.-D.'s edition, identifies this case with monomania mentioned in Esquirol's book on mental diseases. Cf. Pigeaud, La Maladie de l' âme, p. 131.

²¹⁰ Pigeaud has noticed the correspondence between Rufus' text, Problem XXX and Divination in dreams. cf. Pigeaud, op.cit., p. 132.

completely and become stronger.²¹¹ Yet its beginning can also be hidden.

The Krankenjournal provides us, as we have already said, with five cases. These cases, unfortunately, are not rich in psychic symptoms. The first and fourth cases lack every mention of any psychic symptoms. In the second case phantoms appeared to the patient for two days, followed on the third by symptoms of melancholy. The doctor then specifies that the symptoms the patient was suffering were distress (worry) and anxiety about death, as well as insomnia. The third case shares with the second almost the same symptoms such as anxiety and distress with a certain amount of delight. Rufus declares that something has affected the thought-process of the patient of the fifth case and that he was hallucinating. Rufus does not add more to the symptoms. The scarcity of psychic symptoms in these five cases is highly noticeable. Yet one can explain it by the fact that Rufus' emphasis is on therapy. Secondly, some of the cases actually present diseases which turn in time to melancholy. Thirdly, they all have the most two common symptoms of melancholy i. e. fear and sadness.²¹²

We have just seen Rufus paying a great interest in tracing the psychic symptoms of the disease. The abundance of

²¹¹ ar-Rāzī, I, pp. 74-77. For an English translation for the text see Rosenthal, op.cit., pp.198-200.

²¹² Pigeaud maintains that the most common features of melancholy are fear and sadness and the most precise proof of this opinion is Rufus. Cf. Pigeaud, La maladie de l'âme, p. 131.

such symptoms stands as evidence for the peculiarity of the disease as well as for Rufus' distinction as a doctor. Now I shall look at the coin's reverse, in other words, the somatic symptoms of melancholy.

Aetius of Amida and ar-Rāzī are our sources. Some of the somatic symptoms both introduce are identical. For instance : the patient cannot open their eyes well as if they had day-blindness, their eyes are a little rigid, their lips are thick, their skin is dark coloured. They lisp, their voices are thin and hoarse.²¹³ Their tongues are quick in talking. ar-Razi adds that their bodies have little hair, their chests and the related structure are big while everything relating to the belly is thin or shrunken. Their movements are quick, strong and they cannot delay. Besides they may expel the black humour or phlegm by the vomiting or diarrhoea. If the black bile appears either in vomit or in faeces or urine or ulcers or eruption or freckles or leprosy or haemorrhoids or varicoses or enlargements of spleen, they are cured. They have also a lust for coitus. When ulcers appear at the sides, chest and the skin in general accompanied by very painful heat and itching, it is the end.

Aetius of Amida adds that some suffer from indigestion. Some have a generally hard stomach. Some commit suicide.

²¹³ Cf. also Medical Questions, p. 26, 4. Pearcy suggests that Rufus' ideas of the link between hot bile and stuttering was in the air in the second century A. D., and that it might have an influence on Philostratus. Cf. Pearcy "Melancholy Rhetoricians and Melancholy Rhetoric: "Black Bile" as a rhetorical and medical term in the second century A.D." in Journal of the History of medicine and the allied sciences 39, 1984, p. 453.

These somatic symptoms, along with the psychic symptoms give a picture of a disease deservedly called psychosomatic.

In this part of this chapter we have seen how Rufus thinks of the influence of mind affliction on the body in relation to amenorrhoea and melancholy. Rufus, elsewhere, speaks of such a relationship in different terms. He exhorts the doctor who is treating satyriasis not to let his patient fall into fantasies about sexual intercourse during therapy in order to achieve a complete recovery.²¹⁴ Generally he advises the person who wants to have sexual intercourse to follow the desire of both the body and the mind. He rules that the mind should follow the body as it is the rule with other animals.²¹⁵ However, one must say that there is no reference, in Rufus' writings or fragments to the nature of the relationship between the body and the soul in the same way that one can easily find in Plato or Galen or others. This perhaps is due to the fragmentary nature of the sources or more likely to Rufus' character whom one would willingly call him a first rank practitioner without any philosophical insight. Yet, he possesses a remarkable ability of observing the symptoms. We have already seen his ability to notice the effect of the soul on the body; one can also find the effect of some of the somatic diseases on the mind in the form of delirium or insomnia, as in the case of the diseases of the

²¹⁴ R.-D., pp. 83-4, 52.

²¹⁵ Oribasius, Coll. Med., VI, 38, pp. 549-550.

kidneys and the bladder and some other diseases.²¹⁶

In the following section of this chapter I am going to discuss the role of diet according to Rufus in the life of the human being.

IV Diet

Introduction

Greek medicine began with manipulating wounds. Internal diseases were believed to be sent by the gods and there was no rational medicine available. Internal medicine or diet was a later development. It is believed to appear in the fifth century B.C. under the influence of the interest in cosmology and the hypothesis of the constituents of the human body. Whether it owes its emergence to the Pythagoreans or to Herodicus of Selymbria is rather a controversial matter.²¹⁷ Diet was interested in keeping everything relating to man in balance. It was not only a therapeutic mean but also a preventative policy. There was an interest in keeping the

²¹⁶ Delirium appears as a symptom in the inflammation of the bladder, lithiasis of kidneys. Cf. Sideras, Über die Nieren und Blasenleiden, pp. 86,3; 114,2; 134,1. It also appears in phrenitis (Kl., VI,4; VII, 10,19; VIII,1-2,6,12), epilepsy (XVI, 5,6,7,11) and skull fractures in Medical Questions, p. 42,55,57.

Insomnia appears in the lithiasis of kidneys and inflammation and tumours of bladder (Sideras, op. cit., pp. 112,2; 134,1; 146, 11) and also in melancholy (Kl., I, 13).

²¹⁷ Joly believes that the origin of diet was Pythagorean. Cf. Robert Joly, Hippocrate Du Régime texte établi et traduit par Robert Joly, Paris, 1967, pp.ix-xiv.

human body healthy by looking for what preserves health and avoids what endangers it. A balance of the intake qualities and quantities of food and also of exercise is the most essential factor in diet. Various factors were also considered important and taken into consideration such as age, constitution, habits, climate, season and geography of the place. Diet was very much linked with humours so purgatives, emetics, cupping, sweating and bleeding had to be applied regularly to ensure the right balance of the humours in the body. However diet was not the same pattern of life through all the ages. It is clear that social and economic changes cast their influence on what constitutes health to man and what puts him in danger. Mental activities took their place among those afore-mentioned dietetic means until Galen canonized his six non-naturals which include air, food and drink, sleep and wakening, evacuation, rest and motion and mental affliction. The surviving Greek dietetic works and fragments are evidence of the success that diet had encountered through antiquity.²¹⁸

The Hippocratic corpus, the Alexandrians and the

²¹⁸ Cf. the following: Edelstein, "The Dietetics of Antiquity" in Edelstein, Ancient medicine, pp. 303-316; I.M. Lonie, "A Structural Pattern in Greek dietetics and the early history of Greek medicine" in Medical History 21, 1977, 235-260; Wesley D. Smith, "Erasistratus's Dietetic medicine" in Bulletin of the History of Medicine 56, pp. 398-409; Idem, "The Development of Classical Dietetic Theory" in Colloques Internationaux du CNRS No. 583-Hippocratica, pp. 439-446; Huldrych M. Koelbing, Die Ärztliche Therapie, Darmstadt, 1985, pp. 22-26; Phillips, Greek Medicine, pp. 75-84 and also Henry Sigerist (introduction) in Robert Montraville Green, A translation of Galen's Hygiene, Illinois, 1951, pp. vii-xi.

surviving Greek fragments and writings are replete of dietetic interests. The Hippocratic corpus includes works such as Regimen in Health and Regimen in Acute Diseases which discuss the possible diet that should be followed in case of health as well as illness. Rufus followed the medical tradition in paying attention to health preservation. Ibn abi Uṣaibi'a's list and some of the surviving Arabic fragments reinforce such a belief.²¹⁹ Suda's lexicon, the lists of Ibn an-Nadīm and Ibn abi Uṣaibi'a and the surviving fragments in both Greek and Arabic testify to a specific occupation with diet.²²⁰ Moreover, Ullmann, in his article "Neues zu den diätetischen Schriften des Rufus von Ephesos", discusses the authenticity of some of those fragments and gives a German translation for some of them.²²¹

The number of these dietetic works in the Arabic list suggests that Rufus has written many dietetic works. Yet, I do

²¹⁹ The titles are no.13 A treatise on the principles of health preservation and no.36 A treatise on the advices of physicians. For the Arabic fragment see Ullmann, Die Medizin im Islam, p. 74.

²²⁰ Suda's lexicon attributes to Rufus a book on diet composed of five parts, a book on diet for travellers composed of one part and four titles with dietetic content (On figs; On milk; On wine; On honey).

Ibn abi Uṣaibi'a's list has these titles. No.8 The book of the diet of a person who is not attended by a doctor, two treatises. No.17 The book of the diet (regimen), two treatises. No.25 A treatise on the diet of the travellers. No.35 A treatise on the diet of old people. No.53 A treatise on the diet in pregnancy. Besides we have the following titles which do not contain the word diet but are of dietetic character. These are No.11 A treatise of the usage of wine. No.24 A treatise on figs.

²²¹ in Medizin historisches Journal, 1974, pp. 23-40.

not think that some of the titles such as on honey or on wine were separate works. On this point I disagree with Ullmann, who argues that it could be true that Rufus has written separate small treatises on dietetic topics as well as writing a complete big work on diet.²²² Though the Arabic fragments which appear in the works of ar-Rāzī, Qusṭā ibn Luqā, ar-Raḳīq an-Nadīm, Ibn al-Baiṭār and others might give the impression that they were separate works, the titles of the surviving Greek fragments in Oribasius' work Medical Collections indicate that their source is Rufus' book on diet.²²³ This entitles us to maintain that the surviving fragments as well as the titles mentioned in the lists are in fact parts of the big work On Diet or even Rufus' book To the Laymen. The peculiarity of the transmission from Greek into Arabic could stand as an explanation for the presence of such separate works in Arabic. The same nature of the transmission and the disappearance of some manuscripts might explain the difference of the number of parts of Rufus' book from Suda's lexicon and Oribasius' fragments (five chapters); and the Arabic lists which mention that it consists of only two parts. ✓

It is clear from the list of the dietetic works that Rufus paid attention to specific topics concerning diet such

²²² Ibid., pp. 25-27.

²²³ R.-D., fragments nos. 8 (Oribas., Coll. Med., II, 61); 9 (ibid., 63); 10 (ibid., IV, 2); 11 (ibid., V, 3); 12 (ibid., 7); 13 (ibid., 9); 14 (ibid., 11); 15 (ibid., 12). It is worth noting that though fragment no.7 (ibid., I, 40) does not have the title diet an Arabic fragment, which appears in ar-Rāzī and discusses the same topic (figs) though not identical, is headed by Rufus' book on Diet. It is probable that Rufus' book On Diet was also called On Drinks as some of the Greek fragments have the two titles alternatively.

as Diet for old people. It is believed that Ḥunain ibn Ishāq used Rufus' and Galen's works to compile his own work which addressed the same problem.²²⁴ Though it is certain that Rufus wrote on diet for old people it is very unlikely that "Diet for travellers", as Sezgin assumes, might have been used by Ibn al-Jazzār in his work Zād al-Musafir.²²⁵ For, on that matter I agree with Ullmann who refutes this opinion, there is a difference in the subject between the two works.²²⁶ Rufus showed some interest in specific diets for women, some aspects of which I shall discuss later in this chapter.

In this part of this chapter I shall be discussing the harmful influence of diet, in general, on health in Rufus' works and fragments. In different parts of chapters two and three we have encountered Rufus' realization of the influence of some aspects of diet on the human body. We have seen that water, as a part of diet, causes diseases such as guinea worm, arthritis and lithiasis. We have also seen that particular kinds of food as well as indigestion are decisive in causing some harm to the eye as in the case of ophthalmia.²²⁷ Such a knowledge of such an influence has an impact on therapy as Rufus prescribes reduction of food to ophthalmia patients.²²⁸

²²⁴ Ibn abi Usaibi'a, vol. I, p. 323.

²²⁵ Sezgin, Geschichte des Arabischen Schrifttums, III, p. 66.

²²⁶ Ullmann, "Neues zu den diätetischen Schriften", pp.38-9.

²²⁷ ar-Rāzī, II, p. 96.

²²⁸ Ibid. Rufus recommends it to every kind of ophthalmia as well.

On noticing the signs of coming amblyopia, another eye disease, Rufus prescribes evacuation, and changing the food.²²⁹ Those measures, though they are rather preventative, reflect some understanding of the role of food in causation. In treating amblyopia Rufus warns against becoming overfilled with food, eating acrid food and everything from which vapour ascends to the head. He, on the other hand, prescribes gentle vomiting after food and drink.²³⁰

In melancholy we have noticed drinking excessively wine ²³¹, on the one hand, and bad diet, in general, are among its causes. Knowing that diet is the cause of the disease has an impact on therapy.²³² Rufus, in fact, recommends asking the patient about his diet: if he has fallen into the disease because of restraint and a reduced diet, one should employ the opposite means in therapy.²³³ Rufus in general exhorts the physician to investigate everything concerning diet. We have also noticed that the amount of food plays a significant role in menstruation. Little food makes the menses quick and short while much food does not flow out strongly.²³⁴ Not only the

²²⁹ Ibid., II, pp. 215, 235. There is also an exhortation to exercise.

²³⁰ Ibid., p. 235.

²³¹ ar-Rāzī, I, p. 75; ar-Raqiq an-Nadim, p. 227.

²³² R.-D., fragment no. 70, pp. 357-8, 19. Cf. the section on humours.

²³³ ar-Rāzī, I, p. 79. Rufus encourages asking about the patient's diet in his treatise Medical Questions. For a study of this treatise as well as a discussion of melancholy's symptoms see chapter four. For melancholy's therapy see chapter five.

²³⁴ Aetius of Amida, XVI, chap. 50.

amount of food and drink is harmful but also its quality. Thick and phlegmatic food are hostile to menses, while more acrid (pungent) food provides well flowing blood. Old and new wine, cold and hard water are not expedient. We have also noticed that amenorrhoea occurs to those women who are singers gymnastic and rustic.²³⁵ The reason is that nothing is left in their bodies to go out in menstruation because exercise has used up superfluities. When a woman becomes over-heated either though natural crisis or because of over exercise she does not menstruate. Natural heat goes in digesting the food very well and no superfluity remains in the body. Generally over-warm women, those who exercise beyond what is due, and countrywomen do not have abundant menses.²³⁶ For those women who are naturally over-heated, Rufus prescribes a therapy which is exclusively dietetic. The main two elements are to reduce toil and to humectate the body with particular sort of baths, and particular different kinds of food and a specific kind of wine.²³⁷

We have also seen that excessive toil plays a part in bringing about lithiasis.²³⁸ Rufus recommends, when signs predict

²³⁵ Ibid.

²³⁶ Ibid. Ibn al-Jazzār attributes to Rufus the following: women who move a lot do not need much (abundant) menses while those who remain quite and eat much they need much menses. Ibn al-Jazzār, Zād al-Musafir, Mss Dresden Ea 209,1 fol. 225 r; Bodleian I 559 (=Hunt. 302), fol.(p.?)159. There is a Greek translation of ibn al-Jazzar's text. Cf. Giovanni Mercati in: Studi e Testi 31, Rome 1917, p. 38.

²³⁷ Fine white wine which is neither old nor fresh is prescribed cf. Aetius of Amida, XVI, chap. 51.

²³⁸ See the section on water.

stone formation, hastening to give the patient a laxative or a diuretic and order him to rest, since excessive toil leads to stones in the kidneys.²³⁹

Kidneys become weak because of sudden horse riding if they are not being accustomed to excessive hard work, standing for long hours in the sun, and travelling for long distances. In all these cases the faculty of attracting urine weakens and some bloody substances (liquids) might also fall down which could cause ulceration.²⁴⁰

Not only in these diseases can the effect of diet be observed but also in more of Rufus' surviving fragments and writings.

Abandoning exercise leads to melancholy and arthritis.²⁴¹ Arthritis occurs because of excessive humidity and lack of heat and dryness.²⁴² People should dissolve humidity regularly by exercising. Those who do not exercise or abandon exercise completely expose themselves to arthritis.²⁴³ Having applied phlebotomy in the beginning of treatment, Rufus then

²³⁹ ar-Rāzī, X, pp. 109, 141.

²⁴⁰ Age and a blow on the backbone are the other reasons Rufus blames for kidney weakness. Cf. ar-Rāzī, X, p. 54.

²⁴¹ For melancholy see ar-Rāzī, I, p. 75.

²⁴² ar-Rāzī, XI, p. 216. This is the only cause of arthritis given in the Arabic version while it is missing in the Latin version. In fact what we have in the Latin version is the following sentence: *Arthriticas passiones sic utique quisquam bene poterit curare, quia rheuma est et humoris superfluitas habens caloris et siccitatis penuriam.* R.-D., p. 251. It seems that the Arabic version emphasizes exercise while the Latin emphasizes food and its quality.

²⁴³ ar-Rāzī, XI, p. 216.

prescribes rubbing and drying the body through exercises. One should exercise the lower parts if the upper are affected and vice versa. Then one leads the whole body to the strongest and drying exercises.²⁴⁴ Rufus explains that sufferers from arthritis have greater infirmities in their nerves, and ought to be carefully treated.²⁴⁵ Exercise or taking a stroll is prescribed after meals while sleeping after meals is prohibited because it moistens the body.²⁴⁶ Yet, when there are tumours in the joints and when it is warm arthritis Rufus warns against exercise.²⁴⁷

Arthritis also occurs due to excessive food and drink. Rufus, in De Podagra, declares that the magnitude of food and its bad quality lead to arthritis.²⁴⁸ This is in fact the only cause of arthritis that is given in this Latin version of Rufus' work. Knowing the cause has an influence on therapy. Once the patient answers in the affirmative about his pain, food is prohibited and clysters and venesection are

²⁴⁴ R.-D., pp. 253-4; ar-Razi, XI, pp. 162; 216.

²⁴⁵ Arthritici autem maiora mala in nervis patiuntur, qui et superiores et inferiores articulos languent, et ideo hi sollicite sunt curandi. R.-D., pp. 253-254. The Arabic version has the following sentence : Do not lead arthritis patients into strong exercises for when their nerves are hardened they fall into gout. ar-Rāzī, XI, p. 162; p. 216. I think that the two versions represent two different ideas and they are not necessarily identical.

²⁴⁶ R.-D., p. 264; Ar-Rāzī, XI, p.216.

²⁴⁷ ar-Rāzī, XI, p. 219. It is possible to suggest that Rufus means by warm and cold arthritis a qualitative causation of the disease or more likely a feeling of cold or warm accompanying the disease.

²⁴⁸ R.-D., p. 251,4. Et quia ad magnitudinem ciborum feruntur maxime et pessimos utunt cibos, talia incurrunt.

prescribed.²⁴⁹ Abstinance from food is prescribed because food would generate more blood and make the joints more sluggish.²⁵⁰ Later in treatment, when Rufus allows food, he recommends those kinds of food which are easy to digest and which dry the body.²⁵¹

²⁴⁹ Ibid., p. 253. The Arabic version of Rufus' π.τ.ῶν κατὰ ἄρθρα νοσημάτων appears in fragments in ar-Razi's book al-Hawi. XI, p. 162 f. and p. 216 f. Notice that in the Arabic version the exhortation is to reduce the amount of food and not to prohibit it as the Latin version renders it. ar-Razi, XI, p. 216. For those who have rheumatic pains and inflammations in their joints Rufus prescribes administering clysters and abstinence from food and drink for the first few days. If the patient is replete of food or of blood when the pains begin vomiting and phlebotomy are prescribed respectively. R.-D., p. 286. In the Arabic version Rufus prohibits wine and meat.... and prescribes beans for those who have tumours in their joints while he prohibits beans and fish for those who do not have tumours nor inflammation. ar-Rāzī, XI, p. 216; p. 162. He also prescribes reduction of food for warm pains and abstinence from wine for those who have phlegmon in their joints. Ibid., p. 219.

²⁵⁰ R.-D., p. 252. *Diaeta autem, quam quidem a cibis est abstinendus, ut non ex ipsis plus generetur sanguis et pigiora fiant articulis.* Though the Arabic fragments do not mention food as a cause of arthritis, they have the idea that more food generates more blood. ar-Razi. XI, p. 216.

²⁵¹ R.-D., p. 253. The Arabic version says food should be drying. ar-Rāzī, XI, p. 216. In another version humid and quick to rottenness food are to be avoided. Ibid., p. 162. Rufus prescribes those kinds of meat which are digestible and those which do not upset the stomach. (R.-D., p. 261. In an Arabic version Rufus prescribes the most drying kinds of meat and reducing the amount taken. ar-Rāzī, XI, p. 162. On another occasion Rufus warns against giving the patients meat in general for it nourishes very much and humectates which is harmful for them. ar-Rāzī, XI, p. 216. The first Arabic version is closer to the Latin version.) Therefore he does not recommend in particular pork meat for its harmful effect (R.-D., p. 261. "et humida est et conturbat ventrem.") Vegetables do not help but should be given to soften the stomach. (R.-D., p. 259). More drying and easy to digest kinds of fish are prescribed, while those kinds which are fatty, indigestible, upsetting the stomach, phlegmatic and moistening are prohibited. (R.-D., pp. 259-260.) Birds which live in dry places and feed on corn (grain) are greatly recommended for they are digestible and good food while those which live in water or marsh are prohibited for they are humid, watery and

In very brief five fragments which appear in ar-Rāzī's al-Hāwī Rufus blames the occurrence of lethargy, phrenitis and pleurisy to excessive food and drinks.²⁵² While excessive wine, eating too much fruit and indigestion, are the causes of lethargy, eating too much -here the kinds of food are not specified- is the cause of phrenitis. Drinking unmixed wine followed by vomiting, especially when it is the result of drunkenness and indigestion, .is a possible cause of pleurisy.²⁵³ Rufus does not explain the reason why he attributes these diseases to excessive drinking and eating, but it is possible to suggest there is a link between excessive food and drink and the humours. For Rufus remarks on the colour of the sputum either yellow, red, white or black; the latter is considered the most dangerous of all. Too much

not easy to digest. (R.-D., p. 260. The Arabic version says that flesh of dry birds are suitable for them. ar-Rāzī, XI, p. 216.) Particular kinds of bread and wine are also recommended (R.-D., p. 262; Ar-Rāzī, XI, p. 216).

²⁵² These fragments are concerned with symptoms (both psychic and somatic) of both the disease and of recovery. Therapy does not appear at all while causation appears very briefly. For lethargy see I, p. 191; phrenitis, I, pp. 212, 215 and pleurisy, IV, pp. 191, 222. Those fragments, with the absence of the Greek original, are the only available authentic materials for studying Rufus' ideas about these three disease. Krankenjournale preserves three case-histories of phrenitis (nos 6-8) in which the cause is (humoral) imbalance, and five cases of lethargy (nos. 9-13) in which humoral and qualitative imbalances as well as some humoral matters are considered the causes. Particular kinds of food play also a part in bringing about the disease. Ibn abi Uṣaibi' a's list includes a following title no.16 A treatise on pleurisy and peripneumonia which might suggest a separate work or a part of a big work of Rufus.

²⁵³ The fragments of p. 212 and p. 215 are identical. There should be an emendation to a sentence of the fragment of p. 215. It should be emended from لم يكثر الطعام which means "to those who do not eat much" to من يكثر الطعام which means "to those who eat much" as in p. 212.

food or drink changes the humoral balance in the body and hence causes an illness, although Rufus gives no reason why that illness should be pleurisy.

It is interesting to note that phrenitis occurs in young men while pleurisy occurs in all ages but it is instantly fatal to pregnant women. Pleurisy occurs mostly in autumn and winter, and rarely in summer: mostly with the north wind and rarely with south wind.

For children bad food in general leads to various skin diseases : skin eruptions, pustules, humid sores (ulcers) and pestilences.²⁵⁴ Bad quality of milk in particular generates skin eruptions.²⁵⁵ In order to prevent it the nurse should have healthy food and drink, the baby should not be overfed nor insufficiently nourished, for in the first case the food is not digested while in the second it is more bilious.²⁵⁶ Having sufficient food would improve digestion, balance humours, reduce superfluities, make bodies healthy and reduce diseases because of the absence or scantiness of superfluities. If a child becomes replete, then tumours, relaxation, inflation and wind in his stomach are likely to occur, and his urine becomes watery. Specifically, if one wants tall, right-postured children with good skin, one should

²⁵⁴ al-Baladī, K. Tadbīr al-Habalā wa al-atfāl, Maq. III, Bab 52. al-Baladī is quoting Rufus via Paul.

²⁵⁵ Ibid., Maq. III, Bāb 51; Oribasius, Coll. Med., lib. inc.42 (24), p. 148, 1 (C.M.G.). Rufus gives two more reasons for that skin disease. These are : the child' stomach itself does not digest, or some damage happened to the child when he was in his mother's womb.

²⁵⁶ Ibid., p. 149, 5. al-Baladī renders it as follows: repletion spoils the stomach while little milk the body.

avoid repletion of all kinds.²⁵⁷

Diet, according to Rufus, can explain the occurrence of various diseases in different parts of the human body : from eye diseases to arthritis, pleurisy and lithiasis in the kidneys; from lethargy and phrenitis to melancholy ; and from amenorrhoea to some skin diseases in children. Excessive food leads to indigestion and repletion which are considered unhealthy states by themselves or lead to illness.²⁵⁸ However excessive food is not only a primary cause of various diseases; its other effect is to increase the amount of blood in the body, which in turn endangers the humoral balance or creates a morbid humour as in the case of melancholy.²⁵⁹ Insufficient food causes amenorrhoea as insufficient blood is produced to be excreted in menstruation. The message one gets from Rufus' ideas of the role of food on health is that in order to remain healthy, one should have a moderate amount of food and moderate exercise. If the exercise is moderate it helps to get rid of the superfluties of the body while if it increases beyond the moderate level it finishes off the superfluties as in the cases of amenorrhoea. Exercise, whether or not it is excessive, provides the body with some heat which acts on the available matter and leads to lithiasis. Lack of exercise is, on the other hand, harmful,

²⁵⁷ al-Baladī, II, 39.

²⁵⁸ Repletion in general for every body is warned against and linked with disease.

²⁵⁹ See the section on humours.

for the body does not get rid of its own superfluities, which remain and cause some damage as in the case of arthritis. Exercising when the body is not used to it will lead to some weakening of the faculty of the kidneys.

Our next topic is to study Rufus' understanding of the role of diet as a preventative policy. We have already encountered some examples of its preventative role. When Rufus prescribes abstinence from food to those who are newly attacked by arthritis so no more blood will be produced; when he prescribes reforming food and evacuation when signs predict amblyopia; and also when he prescribes reducing exercise when signs predict lithiasis in the kidneys for too much exercise leads to lithiasis, he actually prescribes preventative measures which include an understanding of causation. Rufus' concern with prevention is evident on other occasions. When signs predict plague Rufus recommends improving diet.²⁶⁰ He is also concerned with preventing effusion during sleep, cholera and fever.²⁶¹

Rufus' surviving Greek and Arabic dietetic fragments reflect a wider interest in prevention. This is clear from Ibn abi Usaibi a's list and some of the Greek and Arabic fragments which have a specific interest in gynecology, obstetrics,

²⁶⁰ Oribasius, Synopsis, VI, 25, p. 301,4; R.-D., fragment no. 69, p. 352,5; ar-Rāzī, XV, p. 211.

²⁶¹ For effusion during sleep see Oribasius, Synopsis, IX, 38, p. 527. for cholera see ar-Rāzī, V, p. 216; and for fever see idem, XIV, p. 32.

paediatrics and sexology.²⁶² Though some of the titles do not contain the word diet Rufus' interest in giving a healthy pattern of life is apparent. In all those fragments one can generally grasp that Rufus' aim of writing on diet is to insure a safe body from illnesses either before puberty or during pregnancy or at labour by taking care of food, drink, exercise, sleep, sexual intercourse, evacuation, baths, and also the psychological states. He discusses what is to be taken or given and what is to be excluded. He warns against repletion and insufficiency of food and other things. I am going to concentrate in the rest of this section on discussing Rufus' diet for young girls as an example of Rufus' understanding of the role of diet in prevention.²⁶³

Rufus, as far as our sources can tell, is silent on any theoretical discussion of the healthfulness of menstruation. He aims at insuring a healthy body from illness by mentioning the possible ways of reaching such a goal in a clear way. In other words, Rufus is not a philosopher but only a practitioner. He does not seem to be interested in representing the tenets of any medical school, as Soranus

²⁶² No.12 A treatise on the treatment of women who cannot conceive. No.18 The book of coitus, one treatise (Oribas. Coll. Med., VI, 36; ibid., lib. inc, 9; idem, Synopsis, I, 6; R.-D., frg. 60. ar-Rāzī, Qusṭā ibn Luqā and al-Burqumanī preserve some of Rufus' fragments). No.23 A treatise on virgin girls. No.38 A treatise on birth-giving. No.40 A treatise on the treatment of the suppression of menstruation. No.44 A treatise on the education (up-bringing) of children. No.53 A treatise on the diet in pregnancy. For a list of the relevant Greek and Arabic fragments see amenorrhoea in psychology. See also Ullmann in Die Medizin Im Islam s.v. Rufus and also Sezgin in Geschichte des Arabischen Schrifttums s.v. Rufus.

²⁶³ Oribasius, Coll. Med., lib. inc. 2.

does.

Rufus links puberty with marriage and defloration. He believes that girls should get married at certain time or else they fall into illness because menstruation in them, once grown, does not occur as it should be and when growth stops they become overfilled which is the cause of illness. Moreover if girls have immoderate food and no exercise they fall into danger for they do not want to have coitus because they are relieved by menses. Yet nothing helps more in menstruation than coitus. On the other hand, if girls mature before time while their uterus is not yet ready for conception and delivery they are also in danger. Hence his aim is to provide young girls with a diet that will make them mature only on time and also have a body free from illness.

Rufus rules that diet should not be introduced too early but just before menarche. The beginning of puberty declares itself when growth in girls becomes less than the average and when they do not like to play children games. Rufus rules that girls should not be separated from boys and it is important to avoid repletion. He prohibits meat and every strong kind of food. Water and watery wine is recommended while wine is prohibited because the girls at that time are hot and one should not increase the heat. Exercise which consists of walking, running, dancing, singing and playing with balls is recommended. Yet it should not be beyond the limit so the girls will not turn into men.

Rufus believes that the two factors which determine the quickness or the slowness of the arrival of menarche are the

shape of the body and its nature. He is interested in mentioning, though only a few, the signs of menarche. These signs are pain in the hips, epigastrium, flanks, forehead, eyes and the nape of the neck. It is likely that they have dizziness, and that all the body gaping, shiver, weary and fever. His second aim is to list what is to be done to alleviate the pains. He prescribes reducing the amount of food. He prohibits using any external measure especially palpation in virgins while it is permissible in women. Girls need rest and fomentations.

This study has shown Rufus' interest in diet. Diet appears to be a wide term in Rufus' writings. It explains illness and it is a preventative measure. Later in this study we shall demonstrate how diet plays an active role as a curative mean.

Conclusion

In this chapter I have discussed the influence of four internal factors on the human body. I have given humours a special place as a reflection to Rufus' belief of their role, along with the qualities, as the constituents of the human body. Humours cause illness when imbalanced or in morbid state. Temperaments when imbalanced without any production of a morbid humour are equally capable of engendering health. Humours are responsible for bringing about several disorders most notably melancholy. Mental affliction and diet influence humours and help to develop melancholy.

Rufus' interest in gynaecology, except for his anatomical knowledge, has not been studied by modern scholars. This has been an impetus to study amenorrhoea as a gynaecological disorder in relation with two internal factors anatomy and mental affliction. These two factors seem to obstruct the excretion of blood which should be let out in menstruation. Blood, as one of the humours, is then influenced by those two factors.

Diet as a healthy way of life has been given some attention for Rufus' interest in providing young girls with a healthy diet to reach puberty safely and thereby to be able to get married and have children consequently.

In this account it has been clear that humours play the most important role. The other factors act in fact in relation with humours by influencing and harming them in different ways. Diet seems to be linked tightly with humours as a provider of nourishment to humours and also by harming them when it is a wrong diet or includes harmful kinds of food. Anatomy, on the other hand, obstructs the excretion of blood. Mental affliction is a good example of such strong relationship with humours.

These two chapters have discussed seven causes of illness according to Rufus and it seems very obvious that internal factors play a more important part in his aetiology. Humours in particular are the most important factors of all. Yet Rufus is not ignorant of the influential factors on the human body. Perhaps this makes him look rather a Hippocratic with eclectic tendencies.

Chapter Four. Diagnosis

Chapter Four Diagnosis

Rufus is a practitioner as well as a medical writer. His outstanding clinical expertise and some of his therapeutical measures won him the interest of the Arabs. Chapters Two and Three have demonstrated Rufus' awareness of various causes of diseases. The coming chapter will be devoted for studying some of his therapeutical measures. In this chapter I shall be looking for answers for the following questions: How does Rufus recognize a disease ? What are his methods of diagnosis ? What is his aim of choosing such methods ? How different is his method from his predecessors ?

Our sources are mainly two. The first is Medical Questions, which will provide us with an understanding of Rufus' ideas about the knowledge the bed-side doctor should obtain and how he could obtain it, while the second work is the so-called Krankenjournale which will enable us to see him in action dealing with patients, their families and, above all, their diseases. Though we have no problem of authenticity with the first work, there is a big problem over the second to which we are going to devote a part of this chapter.

The first work is Medical Questions.¹ It is the only surviving Greek work which deals with the questions the doctor

¹ Gärtner, the C.M.G. editor of the text, says that the title Medical Questions is based only on the manuscript tradition and it is possible that it has been added later. Gärtner, Die Fragen des Arztes an der Kranken, p. 19. The Arabic version of this title is " On what the doctor should ask the patient about ". For all the information about the modern editions and translations of this work see Chapter One.

should address to his patient.² It is also important because it is one of the few surviving Greek complete works of Rufus. Yet it is a short one compared with his other complete surviving Greek works such as On the Diseases of the Kidneys and Bladder and one might suspect that something has been lost. Besides, Hans Gärtner, the C.M.G. editor of the text, has noticed, this work lacks an introduction, as the first part goes straight into the theme of the whole work.³ But, in that respect Medical Questions is not unique, for one can find some other writings of Rufus lacking introductions such as On Satyriasis and Gonorrhoea; On Bones; while On the Diseases of the Kidneys and Bladder, On the Naming of the Parts of the Human Body, On the Anatomy of the Human Body, On the Pulse, and De Podagra all have introductions.

In Medical Questions Rufus invites the physician to adopt the method of asking the patient specific questions as an epistemological method for aiming at a more precise knowledge of the disease and a better therapy. By asking questions the physician can learn about the physical and mental condition of the patient as well as the type of disease and its seat.⁴ Rufus explains how. The patient's ability to answer, the relevance of his answer to the question asked, the presence or absence of memory, whether his answers represent the same

² Wellmann and Gossen, according to Gärtner, maintain that the Herophileans Callimachus and Callianax wrote books, which did not survive, dealing with the theme of Rufus' book. I agree with Gärtner on his dismissal of such hypotheses. Ibid., pp. 19-20.

³ Ibid., p. 48.

⁴ Ibid., p. 24, 2.

usual character or not, the state of his voice (shrillness, feebleness, hoarseness, tremor, unclarity), presence of some pauses, hesitancy in judgement or in speech, volubility or speechlessness, are all indicative of various diseases and illnesses.⁵

Medical Questions is divided into two main sections : the first discusses questions about the common diseases ⁶ (which include the fever disorders) and the second is about wounds.⁷ The work ends with a small section on endemic diseases and a defence against anyone who might accuse Rufus of despising the teaching of Hippocrates.⁸ Rufus lists the questions that he thinks significant to achieve his two goals of a more precise diagnosis and a better therapy. He does not impart any order to the questions, except for the first two questions. Besides asking the questions, he tells what sort of information one can get as answers and explains its usefulness in diagnosis and therapy. He occasionally backs up his point by citing some case-histories from his own experience or that of others.

His first question is about the time of the beginning of the disease, for this is particularly important in the diagnosis of critical days and in treatment.⁹ The second question in order is whether the disease is habitual or has never occurred before.¹⁰ It is also good to ask about each

⁵ Ibid., pp. 24-6, 2-8.

⁶ Ibid., pp. 28-40, 11-45.

⁷ Ibid., pp. 40-44, 46-62.

⁸ Ibid., pp. 44-6, 63-73.

⁹ Ibid., p. 28, 11-14.

¹⁰ Ibid., p. 28, 15. 194

patient's natural state, for instance in what concerns digestion and medicaments.¹¹ The doctor should inquire about the patient's appetite and thirst, each of his habits, and what he is used to for food, in what form, quantity and preparation. The knowledge of the patient's habits enables the physician to prognosticate the former's judgement, inclination, language, speech and other faculties.¹²

Another question is about the causes of the diseases, for such knowledge determines treatment and they are not knowable other than by asking.¹³ An inquiry should be made about the patient's evacuations (urine, faeces and saliva) in sickness, their quantity, constitution, colour in relation with the quantity, quality and time of the food taken.¹⁴ The doctor must also ask about sleep, wakefulness, dreams and visions.¹⁵ He also has to ask whether the disease is congenital or not, its periodicity, its transformation and its former symptoms because they are all important in prognosis and therapy.¹⁶ An enquiry must be made about the diet, the drugs in sickness and the whole treatment and the patient's reaction to it.¹⁷ The doctor must ask whether the patient has been eating or not,

¹¹ Ibid., p. 30, 16-17.

¹² Ibid., p. 30, 18-20.

¹³ Ibid., pp. 32-4, 24-26.

¹⁴ Ibid., p. 34, 27.

¹⁵ Ibid., pp. 34-6, 28-33.

¹⁶ Ibid., p. 36, 34-35.

¹⁷ Ibid., p. 36, 36.

and if so, when and in what amount.¹⁸ Next he should ask about the kinds of food agreeable to the patient, what are the easiest to digest and pass, what create urine, make acid, or do harm.¹⁹ He must ask about pain and the patient's character.²⁰ He also asks about affairs of the belly, and the ease or the difficulty of other evacuations.²¹

Rufus then turns to the uncommon diseases i.e. wounds. Whether the dog, in case of rabies, is rabid or not is an important question for it makes a difference in therapy. The doctor should also inquire about the bites of other animals.²² In case of arrows it is necessary to ask whether the arrow has been wholly extracted or only part of it ²³, as well as about substances smeared on the arrows, for some of them are poisonous.²⁴

It is necessary to inquire in case of head injuries whether the head has been hit because there is a fear that a bone might have been broken, especially when there is no visible wound.²⁵ The size, shape, and hardness of the projectile, also the strength of the man who threw it and its force, the projectile's starting direction, and the symptoms that

¹⁸ Ibid., p. 36, 37-8.

¹⁹ Ibid., pp. 36-8, 39-40.

²⁰ Ibid., pp. 38-40, 41-43.

²¹ Ibid., pp. 38-40, 44-45.

²² Ibid., p. 40, 46-9.

²³ Ibid., pp. 40-2, 50-1.

²⁴ Ibid., p. 42, 52-4.

²⁵ Ibid., p. 42, 55-58.

followed the blow should all be inquired about.²⁶ Finally the doctor ought to ask about water, vegetable products, climate and also about endemic diseases and their special treatment, especially when he is a foreigner and new to an area.²⁷

Rufus believes that the patient should be questioned by his doctor.²⁸ Yet when it is not possible to ask the patient himself through some hindrance of communication, the doctor then should ask those present about this hindrance, whether it is a result of the disease or the patient has had it for some time before the start of the illness (he gives as an example deafness).²⁹ More hindrances of communication are excessive delirium, apoplexy, lethargy, catalepsy, speechlessness, or some idleness or silliness, general weakness, or when it is only convenient to speak as little as possible, as in haemorrhage from the lungs, or if the patient is a child or an old man or does not speak the same language, the doctor should ask one of the attendants.³⁰ As it is clear, these hindrances are either due to the disease itself or natural physical and mental impedimenta or due to a natural non-pathological factor such as age or speaking a different language. On another

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²⁶ Ibid., pp. 42-4, 59-62.

²⁷ Ibid., pp. 44-6, 63-71. Rufus, elsewhere, recommends asking the natives about what is unnatural in the climate, water etc. Orib. Coll. Med., V, 3, p. 33, 4.

²⁸ Throughout the work there are exhortations as well as justifications of asking the patient all the time. Yet we have three occasions where the message is put in very plain words. Such occasions are ibid., p. 24, 1; p. 30, 17; p. 42, 59.

²⁹ Ibid., p. 24, 3.

³⁰ Ibid., p. 26, 10. He recommends asking the patient or one of the attendants. Ibid., p. 30, 21.

occasion Rufus recommends to the doctor, if he has failed to find a therapy for the patient whom he has encountered for the first time, to consult the patient's former doctor and, if not, a layman associated with the case.³¹

Also the doctor should, arriving at a new city, ask the natives about its water, fruits and climate.³² Another question which could not possibly be addressed to the patient or to his family or to the other figures mentioned above relates to the application of a cataplasm against the poisoned arrow in case of injuries in war. This time the question should be addressed to either a prisoner or a deserter.³³

The summary of this work has shown two points: firstly, Rufus' interest in gaining some information about the patient, his disease and his environment from the patient himself or someone among those present. In special cases a native or a prisoner is interrogated for such information. Secondly, it has shown what points Rufus thinks are helpful in achieving a more precise diagnosis and a better therapy. Rufus' interest in diagnosis and its linkage with therapy, I argue, stands in

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³¹ Ibid., p. 38, 40. Rufus has a work with the title To the Laymen, of which some Arabic fragments survive. In one of its fragments Rufus encourages an inquiry about diet. ar-Razi, XXIII, pp. 104-5. Gärtner has alluded to its Latin version. R.-D., frg. 363.

³² Gärtner, Die Fragen des Arztes an den Kranken, p. 44, 64.

³³ Ibid., p. 42, 54. Rufus' knowledge of surgery is not surprising for Ibn Abi Usaibi a's list of Rufus' works includes two works on surgery. These are no.34 a treatise on wounds and no.39 a treatise on dislocation. Unfortunately we do not have any fragments which would perhaps have given us some information about the nature of Rufus' practice or knowledge.

comparison with a lesser interest in prognosis. These three points need further discussion.

Let us discuss each point in detail. Rufus urges the physician to ask the patient questions. He was not the first Greek doctor to ask his patients in order to gain information about their cases. There is some evidence that the Hippocratic writers used this technique.³⁴ Rufus himself in his polemic against Callimachus admits that the doctors whom he admires all use such techniques except Callimachus. But there should be, I believe, a distinction between scattered questions about some points of interest to the doctor and dedicating a whole treatise for promoting the art of asking specific questions for particular purposes. As Rufus himself says elsewhere :

....to compile in one treatise all what has been said and to add to it what is later known and otherwise kept separate, this makes the work useful and valuable.³⁵

Yet it is striking that Rufus is silent on the origin of his system of learning.³⁶ Moreover, the only mention of Hippocrates in this text is when Rufus explicitly announces

³⁴ Lloyd says: " the Greek doctor was given instructionabout the questions he should put to his patient." Lloyd, Magic, Reason and Experience, p. 91. See also f.n. 172 of the same page for the type of questions the Hippocratic corpus contains. Heidel also gives a few examples of the questions the Hippocratics ask. Heidel, Hippocratic Medicine, pp. 64-5.

³⁵ This is Rufus' answer to a question he himself asks. It goes thus: Some one will say that these discoveries are not mine and that Hippocrates in old times mentioned many things in many writings. I agree. But what has not been written by Hippocrates ? Cf. Oribasius, Coll. Med., XLV, 30, p. 84, 3.

³⁶ It is interesting to note that the doctrinal position of Rufus is not identified by any ancient or Arabic authority, except by Ibn al-Qiftī who calls him a naturalist physician. Cf. Ibn al-Qiftī, Tarikh al-Hukamā', Leipzig, 1903, p. 185. For modern scholars' disagreement on Rufus' identity see Chapter Two. For my opinion see the Conclusion.

his disagreement with those who say that, by advocating the questioning of natives, he is disagreeing with the father of medicine who established the art of recognizing everything previously unknown when arriving at a new city without having to ask questions.³⁷ As there is no evidence for Rufus' justification for not mentioning the origin of his system it is only possible to guess. Rufus has already said that all those whom he respects follow the method of questioning so he does not need to specify anybody. Perhaps he does not find it relevant to discuss this point and to advocate the supremacy of the Hippocratic knowledge especially when he feels it is not the sole or an entirely adequate source of knowledge, as the end of the work would seem to suggest. I shall go back to this point later in this chapter.

Rufus has announced in this work a particular discipline, i.e. that of direct questioning. Rufus' exhortation to practise questioning means also that the doctor should pay attention to the significance of these points in his assessment of the patient's case. For instance, when Rufus encourages the physician to ask the patient about his dreams he mentions three case-histories, in two of which the patients have told their doctor and their trainer their dreams. But the

³⁷ There are some examples of Rufus' disagreement with Hippocrates. Rufus discourages Hippocrates' use of surgery to extract stones or pus from the kidneys. While he acknowledges its profitability to the art he refrains from employing the most violent remedies voluntarily (See Chapter Five). Rufus is also against the Hippocratic administration of hellebore to those who suffer from dislocation in a big ulcerated joint or those who suffer from broken bones (Orib., Coll. Med. VII, 26, pp. 137-138, 179). Yet Rufus' use of Hippocratic material is very clear in Medical Questions. Gärtner has recorded such Hippocratic influence throughout Rufus' treatise.

latter have done nothing to treat them for they could not see their significance. Rufus ends this section by reminding us about the close relation between the humours and dreams. In other words it is important to ask those particular questions and it is equally important to interpret them for the benefit of a precise diagnosis and a better therapy.

Another interesting aspect is the link, or rather in fact the absence of a strong link, with prognosis. It is well known that prognosis is a Hippocratic measure by which the physician can, on encountering his patient for the first time, tell the past, the present and also the future of both the patient and the disease.³⁸ A few Hippocratic treatises have survived which reflect this prognostic view of medicine, such as Prognosticon and Airs, Waters and Places. This view of medical practice was not only expressed in the H.C. but also in Galen who opposes all those who, out of ignorance, reject prognosis.³⁹ On the other hand, Rufus mentions prognosis in Medical Questions on only three occasions. The first comes when Rufus says that the knowledge of the patient's habits helps to prognosticate about the patient's character, judgement, inclination, language and every faculty.⁴⁰ The second when he attacks Callimachus, who is the only one among those to whom Rufus pays attention who declines asking and contents himself with signs which are

³⁸ Prognosticon, 1. Cf. W.H.S. Jones's translation of the text in the Loeb Classical Library s.v. Hippocrates, vol. II.

³⁹ Galen, On Prognosis ; Edition, Translation, and Commentary by Vivian Nutton, Berlin, 1978 (C.M.G. V 8, 1), p. 133.

⁴⁰ Gärtner, Die Fragen des Arztes an den Kranken, p. 30, 19-20.

enough to indicate both prognosis and treatment.⁴¹ The third is when Rufus advises asking about the periodicity, the transformation and the past symptoms of the disease for their value in prognosis and therapy.⁴² On the first point, Rufus emphasizes the importance of prognosis on a relatively minor medical point i. e. in order to know more about the patient's character and not his physical state, while on the second Rufus is quoting Callimachus' opinion. Only on the third occasion is prognosis given some importance in Rufus' eyes. Gärtner has described the retreat from prognosis in Rufus' text as perhaps not uncharacteristic of him. He argues that Rufus, unlike any other doctor, does not seek any self promotion.⁴³ I agree with him. Hence I am going to concentrate, first, on giving examples of Rufus' retreat from prognosis. I shall be arguing that, the absence of a strong interest in prognosis in Rufus' work has medical, social and cultural meanings.

Medical Questions has shown Rufus' interest in dreams and visions.⁴⁴ One of the cases he brings is about a wrestler who had a dream and told his trainer about it. Yet the latter did not take it seriously and the result was the death of the man. Rufus comments that the man would not have died if the trainer

⁴¹ Ibid., p. 32, 21.

⁴² Ibid., p. 36, 35.

⁴³ Ibid., p.48.

⁴⁴ It is significant to note that Ilberg describes the section on dreams as diagnosis and not prognosis. Ilberg, Rufus von Ephesos, p. 13.

had been more attentive.⁴⁵ One could say that the trainer realized that the man would be dying any way so he did not feel the need of applying any treatment. Rufus did not discuss it to prove the prognostic value of dreams but to emphasize the value of interrogation in discovering the patient's case and the strong relation between humours and dreams. A further example comes from the case of rabies. Rufus encourages inquiring about the animal to see whether it is rabid or not. For if the doctor waits until the symptoms arrive, there will be enormous danger. He mentions two cases. A man died, although his friends and doctors provided little positive advice, while his wife was saved as Rufus ordered an abortion for her. He adds that she would have died if he had not ordered an abortion.⁴⁶ Rufus gives the impression that it is possible to prevent any complication of the case by applying some treatment at good time. Thirdly the knowledge of the time of the beginning of the disease is helpful in diagnosing the periodicity of symptoms.⁴⁷ Rufus does not say that it will help learning if the patient is going to die or survive. Yet it is dangerous to argue from silence.

Rufus seems to be arguing that he can help his patient by providing him with some treatment once he recognizes his illness. To be able to anticipate the death of the patient is no matter of concern to Rufus for the patient's death is only

⁴⁵ Gärtner, Die Fragen des Arztes an den Kranken, p. 34, 29-31.

⁴⁶ Ibid., p. 40, 47-8.

⁴⁷ Ibid., p. 28, 11-12.

due to a lack of treatment. In other words there is no, or at best only a minimal, role for prognosis in his work.

Edlestein has argued that prognosis had for Hippocrates a social value.⁴⁸ For instance in Prognosticon the social value of the Hippocratic method is to impart confidence in the doctor. Although it is dangerous to argue from silence, I am suggesting here that the absence of a strong interest in prognosis is linked with an absence of a social role in Rufus' technique of interrogation. Rufus does not reflect an interest in winning over his patients or their families. Nor does he consider the possibility of an emergence of some questions from the patients or their families. Nor does he represent any interest in silencing medical opponents. In fact the competitive aspect of the medical profession is absent in Rufus' work. This picture is different from the impression the Hippocratic corpus and Galen give. The heat of medical competition in both the Hippocratic and the Galenic corpora is felt while it is missing in Rufus'.⁴⁹ Moreover, despite his concern with the participation of the patient in diagnosis there is no indication of a similar interest in informing the patient of the result of all this active work i.e. what he is going to face. In fact Rufus encourages hiding the true nature of the disease from the patient with melancholy and suggests

⁴⁸ Ludwig Edlestein, Ancient Medicine, pp. 65-85.

⁴⁹ Lloyd mentions that the Hippocratic work Diseases I provides guidelines on the questions, answers and the objections the doctor either faces or addresses to and from his fellow doctors. This treatise instructs him what to do and how to meet them. Lloyd, Magic, Reason and Experience, p. 91.

informing him instead that it is indigestion.⁵⁰ His recommendation is out of his understanding of the influence of mental affliction on the body i.e. for medical purpose.

In general Rufus does not show explicit concern with the social value of his system. And it is no surprise to find him uninterested in prognosis.

At the end of his treatise Medical Questions Rufus turns his attention to endemic diseases and encourages his reader to inquire about the new country's water, crops and climate. He even gives an example from his own experience of a disease called ophis which is known to be among the Arabs.⁵¹ Having made his point, he might very well have ended the work, but Rufus diverges to talk about Hippocrates and alludes to his treatise Airs, Water and Places.⁵² He feels he has committed a mistake because there is already a work which gives all the needed information. Rufus keeps his ground firm by defending his own system.⁵³ A.W.P. is without any doubt a prognostic work. It provides the reader at least in the first half of it, with a fair picture of what he can expect in each country. By distancing itself from such a prognostic work, Rufus also alludes to the open horizons of knowledge the doctor can seek

⁵⁰ ar-RĀZĪ, I, p. 79. Lloyd mentions that "the Hippocratic treatise Decent, advocates forecasting the outcome of disease on the basis of experience, though it later advises withholding certain information from patients." Lloyd, The Revolutions of Wisdom, f.n. 127, p. 40.

⁵¹ Gärtner, Die Fragen des Arztes an den Kranken, pp. 44-6, 63-69.

⁵² Nowhere does Rufus mention a Hippocratic title.

⁵³ Ibid., p. 46, 72-3.

when asking. Perhaps he is driven to this conclusion from his own experience. Having lived in Egypt has made him realize the ethnic, and climatic differences. The horizon of the Hellenistic and the Roman worlds are wider than that of the Hippocratic, hence the doctor needs to ask rather more questions.⁵⁴ Questioning carries within itself new information and the possibility of prognosticating may become less possible. It would be difficult for the physician to anticipate the future of the disease and the patient when he himself encounters such a disease for the first time. In other words he needs to ask for the natives' help and his knowledge without an outside help is not completely adequate in combating the disease.

Why would Rufus feel the need to defend himself when he proclaims a different opinion from that of Hippocrates? It could be an artistic measure adopted by Rufus in his writings and consistent with our knowledge of the curriculum of medical students of his time : one imagines an opponent and lays out one's argument in defying him.⁵⁵ I believe that Rufus has already given an example earlier in the same work when he puts his ideas in disagreement with Callimachus. But why would Rufus frequently choose Hippocrates as an authority to

⁵⁴ Gärtner comments on Rufus listing among the hindrances of communication between the patient and his doctor the differences in language that it is not surprising, bearing in mind the (cosmopolitan) nature of Rufus' world. *Ibid.*, p. 55.

⁵⁵ Lloyd mentions that some treatises of the Hippocratic Corpus have rhetorical stylistic characters including dealing with "the objections of imaginary opponents". Lloyd, Magic, Reason and Experience, p. 88. For a discussion of the use of rhetoric in the H.C. cf. *ibid.*, pp. 86-98.

disagree with ? One might consider accepting Smith's idea that Rufus' attitude is perhaps a reaction to a Hippocratic tyranny which does not tolerate any difference with its main stream.⁵⁶ Galen reflects this sort of intolerance very well.⁵⁷ It is very likely then that Rufus is sincere in his dislike of the contemporary use of A.W.P. Such an employment dismisses all the attempts of creativity in what relates to the Hippocratic Corpus.

Earlier I have compared Rufus' Medical Questions with the Hippocratic Prognosticon in what relates to the social value of those doctors' medical techniques. There are a few more points of correspondence between Rufus' Medical Questions and Hippocrates' Prognosticon. Rufus mentions endemic diseases at the end of his work which reminds us very much of almost the same occurrence of the same subject at the end of the Hippocratic work Prognosticon. Having laid out his argument, Hippocrates ends the work by dealing with endemic diseases very casually.⁵⁸

⁵⁶ Wesley Smith, The Hippocratic Tradition, p.241.

⁵⁷ Lloyd has recently argued that Galen's attacks on his contemporaries in the name of Hippocrates could be interpreted in various ways. It could be a reaction or a cover against those who use the name of Hippocrates against Galen. His interest in Hippocrates is because Plato was interested in him and because Hippocrates embodied what Galen wanted a doctor to have of knowledge and practice. G.E.R. Lloyd, Methods and Problems in Greek Science, pp. 398-416.

⁵⁸ Hippocrates says : It is also necessary promptly to recognize the assaults of the endemic diseases, and not to pass over the constitution of the season. However, one must clearly realize about sure signs and about symptoms generally, that in every year and in every land bad signs indicate something bad, and good signs something favourable, since the

More striking is the absence of any use of pulse in diagnosis, despite the existence of a work on pulse, ascribed to Rufus, where it is linked with diagnosis. Perhaps Rufus has not included it because to take the pulse is the doctor's job. Similarly Rufus does not discuss breathing, although there are some interesting observations on it in some of his other writings.⁵⁹ Or perhaps Rufus has not included it because he did not know much about it.⁶⁰ The third explanation which is also plausible is that Rufus has not included it because he is taking Prognosticon as a model and we know very well that the pulse is not included in the Hippocratic work and the diagnostic value of the pulse is absent from the H.C.⁶¹

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describes
a book on the pulse
Rufus is erroneous!

To sum up: Rufus, in Medical Questions, advocates the system of interrogation as an epistemological method. He points out the value of his system throughout his treatise and describes

symptoms described above prove to have the same significance in Libya, in Delos, and in Scythia. So one must clearly realize that in the same districts it is not strange that one should be right in the vast majority of instances, if one learns them well and knows how to estimate and appreciate them properly. Prognosticon, 25. (Jones' translation).

⁵⁹ ar-Razi, I, p. 191; IV, pp. 191, 221. Krankenjournal, VIII, 13, 17; XIII, 3, 10.

⁶⁰ σφύζων appears occasionally in Rufus' writings : On the Diseases of the kidneys and Bladder, pp. 98, 2; 144, 4; On the Naming of the Parts of the Human Body, R.-D., pp. 155, 166; 156, 162; 163, 208; On the Anatomy of the Human Body, *ibid.*, p. 184, 65; Kl. VIII, 13, 17; XIII, 3, 10; ar-Rāzī, V, p. 216, VIII, p. 189.

⁶¹ Heidel notices the absence of the diagnostic value of the pulse in the H.C. He explains that Praxagoras in the generation after Hippocrates was the first to recognize the importance of the pulse. Heidel, Hippocratic Medicine, p. 66. Cf. also Lloyd, The Hippocratic writings, p. 31.

its utility for medical practice. He believes in interrogating the patient for gaining some information about him, his illness and his environment. Yet he is also aware that patients are not always reliable. For, according to their characters, they may exaggerate in expressing their pains just like the actors in Greek tragedy. Therefore the doctor should ask about the patients' characters before he can rely on their statements.⁶² By advocating interrogation in order to recognize the ailment, and by casting doubts on the absolute authority of the Hippocratic treatises, Rufus has admitted the limit of the doctor's capacity for learning by himself or through the medical manuals alone. One needs to ask the others, whoever they are, patients, relatives, natives and deserters in case of war injuries. By applying this system Rufus appears to be an open-minded doctor.

Yet as a good doctor he does not deny the value of observing signs and interpreting them for identifying and treating the disease. In his disagreement with Callimachus, he admits that there are things in which observation coincides with answers to questions: a patient says that he has exceeded his limits of eating at the same time as the symptoms reflect a case of repletion: similarly, if he says he is weary and the symptoms are of weariness. Nevertheless there are occasions where the two systems cannot be employed, and a preference should be given to only one of them, i.e. interrogation. He says that there are cases in which the doctor cannot rely on symptoms

⁶² The Hippocratic doctors were aware of the misleading answers of some of their patients. Heidel, Hippocratic Medicine, p. 64.

for recognition, such as the time of the beginning of the disease, the patient's habits, and his or her nature.⁶³ Such things are not knowable without asking. Also, waiting for the signs to appear may create complications in treatment, as in the case of rabies.⁶⁴ Or, in fact, signs may indicate contradictory things and the use of questions becomes essential.⁶⁵ In brief Rufus believes in the two methods, but there are things it is better for the sake of the treatment to ask about rather than to wait for the appearance of the signs. Yet by combining interrogation with observation, Rufus appears to be Hippocratic. In the second half of this chapter I shall be looking for more possible methods of recognizing illness by witnessing Rufus in action, dealing with his patients with two specific diseases melancholy and arthritis.

Application

In Chapter Two and Three I have given Rufus' explanation for the occurrence of two important diseases : melancholy and arthritis. In this part of this chapter I shall be interested in observing how Rufus detects their presence in the body. I shall be looking for prognosis in Rufus' handling of these two diseases and I shall be also asking questions about the relationship between Rufus' recognition of the disease and the

⁶³ Gärtner, Die Fragen des Arztes an den Kranken, p. 32, 21-23.

⁶⁴ Ibid., p. 40, 49.

⁶⁵ Ibid., p. 34, 26.

treatment he chooses. I have chosen melancholy and arthritis for two reasons. First, melancholy, which won Rufus the admiration of both Galen and the Arabs, is a psychosomatic disease and it will be interesting to study how different Rufus' method of recognizing its presence is from that in a somatic disease such as arthritis. Secondly, Rufus' writings on melancholy and arthritis survive in a peculiar form. Melancholy survives in Greek and Arabic fragments while arthritis survives in a Latin version, as well as in Arabic and Greek fragments. Moreover there is the so-called Krankenjournal, a collection of twenty-two case-histories in Arabic, five of which deal with melancholy and only one with arthritis which give us the opportunity of witnessing Rufus the practitioner dealing with patients and their diseases. Hence it will be a challenge to form a picture of Rufus' ideas from this fragmented material. Yet before studying Rufus' diagnosis of melancholy and arthritis it is important to deal first with the authenticity of the so-called Krankenjournal.

Krankenjournal

No Greek or an Arabic list of Rufus' works mentions this work of case-histories. Its Arabic title is :

في الذئلة والعلاجات الجزئية لروفس وعنده للقدمات والمحدثين

(Examples and (local) particular therapies of Rufus and others from the ancient and modern (physicians)). In other words, it indicates that the authorship of the text belongs to

Rufus and anonymous doctors both ancient and modern. Yet Ullmann who has edited this text and named it Krankenjournal, has tried, despite the title of the text, to prove Rufus' authorship of the whole work. I am going to give a summary of his arguments. I shall be arguing that Rufus is not the sole author of this text.

Ullmann's arguments can be divided into two sections.⁶⁶ In the first section he tries to prove that the text is one unit of Greek origin and that it is a product of a single author's pen not a compiler's. Ullmann argues that those anonymous doctors mentioned in the title are those mentioned inside the cases or those of the other parts of the text which did not survive. In the second section of his arguments, Ullmann tries to prove that the author of the whole text is Rufus. He maintains that it is not surprising to find Rufus, who showed elsewhere in his writings an interest in case histories, dedicating a whole work to case histories. Points of correspondence between Rufus' case histories and Kj. on the one hand, and between Rufus' works and Kj. on the other, prove Rufus' authorship of the text. Ullmann, having argued for Rufus' authorship of the whole work, rejects the possibility that Kj. is a compilation of Rufus' own case histories because if it were, the same materials would in all likelihood occur elsewhere in different Arabic works which is not the case. He therefore maintains that Kj. is a record of Rufus' achievements delivered in a contest at Ephesus which we know that it used to take place there among physicians. He finally

⁶⁶ Manfred Ullmann, Krankenjournal, pp. 15-25.

argues that it is written on the model of the Epidemics.

Despite Ullmann's efforts to establish Rufus' authorship of the whole text, some doubts still remain. I agree with Ullmann that the text is one unit. Yet it could be due to a compiler rather than to an author. Even if one agrees with him that it is of Greek origin that does not eliminate the probability that it is a compilation. In Kj. the verb "he said"⁶⁷ which preceded the narration of some of the cases is usually added by an editor or a compiler. It reminds the reader of Rufus' fragments in ar-Rāzī's book al-Hawī. ar-Rāzī often introduces the quotations with the verb "he said". Moreover the title of Kj. indicates the co-authorship of anonymous doctors. I find it hard to agree with Ullmann that those doctors mentioned in the title would be only those mentioned in the cases for the title says clearly that doctors both modern and old. Rufus usually quotes only ancient authorities while he rarely mentions the case histories of his contemporaries.⁶⁸ Ullmann's explanation of the title of the text (Examples and (local) particular therapies of Rufus and others from the ancient and modern (physicians)) does not help in establishing Rufus' authorship. His suggestion that those anonymous doctors are authors of other parts of the text which did not survive implies that the text is a compilation. It also casts doubt on the possibility that the end of the

⁶⁷ Kj., I, 1; VIII, 1; XIX, 1.

⁶⁸ It is probable that the doctors mentioned in these three cases histories are contemporary to Rufus. Yet they are anonymous. Cf. Gärtner, Die Fragen des Arztes an den Kranken, p. 34, 29-30; Oribasius, Coll. Med., VII, 26, p. 139.

case twenty two is the end of the part ascribed to Rufus for it could be his or not.

In the second part of his arguments, Ullmann tried to refute the theory that Ki is a compilation of some of Rufus' case histories because if it were, those case histories would appear elsewhere in Arabic works. I do not think so. The known appearance of a particular case in only one work does not mean that it does not exist elsewhere and, as we know very well, many materials have been lost or perhaps have not yet been discovered. I'd like to back up my view by referring the reader to the Arabic work Bustān al-aṭibba wa raudat al-alibā by Ibn al-Maṭrān where one can find many sub-titles such as Hikaya or Ishara (story or allusion). One of Rufus' case histories is mentioned in this work ⁶⁹ and as far as our knowledge of the Arabic materials can tell, there is no other appearance of this case in any other Arabic work. Despite the fact that the case mentioned by Ibn al-Matran deals with head injuries, it is not included in Ki, which deals with head cases. Also there is no guarantee that a case history of Rufus mentioned by one author will be repeated by another. A glance at the fragments in R.-D. show that the overlap is far from total.

Ullmann suggested that Rufus delivered his case histories in a contest at Ephesus in the second century A.D.. I do not agree. This sort of contest is not known before late second century A.D. whereas I have suggested that Rufus was living in

⁶⁹ Ibn al-Maṭrān, Bustan al-Aṭibbā, Ms. National library of Medicine A 8, fol.4b 11.

the second half of the first century A.D. Moreover there is no evidence for the exact meaning of the four parts into which these contests were assumed to be divided that would make us believe that a presentation of a collection of case histories was delivered there.⁷⁰ Thirdly, it would be strange for a person, in presenting his own achievement in a contest, to incorporate within it both the mistakes and the successes of others.⁷¹ Besides I cannot imagine Rufus competing, especially when we have no evidence from the rest of his writings of this competitive attitude in Rufus.

I would like to suggest that Kj. is a compilation. Whether it was compiled by a Greek author in late Antiquity, as Kudlien suggested ⁷², and then presumably translated into

⁷⁰ For a discussion of these medical contests see J. Keil, "Ärzteinschriften aus Ephesos"; JÖAI 1905, 128-138. For a modern edition of these inscriptions see Die Inschriften von Ephesos, teil IV, herausgegeben von Helmut Engelmann, Dieter Knibbe, and Reinhold Merkelbach, Bonn, 1980.

⁷¹ For the others' mistakes see Kj. III and for their success see IV. For pseudo-Rufus' failure see XIX and XX.

⁷² Ullmann interprets the mention of Erasistratus' name in Kj. as a new testimonium for the latter. He also uses it to prove the non-Arabic origin of the text as we know of no Arabic translation of Erasistratus. Kudlien, on the other hand, doubts Rufus' authorship of the text. He rejects the authenticity of this case where Erasistratus is quoted, because, according to Galen, Erasistratus restricted the use of bleeding in therapy. Moreover it is unlikely that Rufus, who was an Hippocratic commentator, did not know that Hippocrates mentioned the deadly type of angina as this case history suggests. Fridolf Kudlien, "A new testimony for Erasistratus" in Clio Medica, 15, 1980, pp. 137-142. I agree with Kudlien that it is hard to find Rufus who, has commented on the Hippocratic Corpus, neglecting the fact that Hippocrates mentioned that the type of angina, none of whose symptoms appear on the neck or in the throat, is deadly. However while Rufus shows his familiarity with Erasistratus' anatomical knowledge of nerves, there is no evidence of Rufus' knowledge of Erasistratus' practice and hence it is hard to attribute to Rufus such a sentence. Yet, it seems to me that

Arabic, or compiled by an Arabic writer of Arabic translations of Greek writers is hard to answer. I can only say that the language of those cases of Ki. is inferior, for instance, to that ar-Rāzī's Arabic case histories,⁷³ which might support both hypotheses. For instance Ki. uses the passive mood " I have been summoned " ⁷⁴ which are not common in Arabic and are likely to be translations. On the other hand I would like to suggest that Rufus is the author of the first part of this text. His authorship of the first case of Ki. is certain as the title of the case itself indicates, while his authorship of the four following cases on melancholy is highly likely. Rufus was renowned among the Arabs for his work on melancholy, and such a reputation was not shared with any one, not even Galen. Besides the way these five cases are presented gives the impression that they are narrated by one author who is the author of the first case. Yet I do not think that Rufus is the author of the rest of the work. The character(s) of the doctor(s) of the rest of the cases differ from the character we know of Rufus. Rufus appears to be modest elsewhere while in the rest of the cases we find a less modest and rather a

this case history, with its interest in attributing to Erasistratus the use of phlebotomy in treating this kind of angina, has an air of Galen ?

⁷³ See Max Meyerhof, " Thirty-three clinical observations by Rhazes (circa 900 A.D.)" in Isis 23, 1935, pp. 321-356 (Arabic text pp. 1-14).

⁷⁴ Ki. VI,1; VIII,1; XI,1; XII,1. There is also the expression " it has been put in it" Ki. XVII, 17. Moreover Ki. has the expression " I know some one else" which is not an elegant Arabic. See also Ullmann's commentary on the text where he mentions the Greek origin of some of the Arabic sentences.

competitive person.⁷⁵ Besides Rufus introduces his cases with the sentence εἶδον " I have known" or ⁷⁶ while ten of the cases begin with the sentence " I have been summoned " which appears only twice in Rufus' case histories.⁷⁷ The medical concepts which appear in this text coincide with our knowledge of Rufus' ideas as well as of others.⁷⁸ But to go further and attribute the whole work to Rufus is unlikely.

Having discussed the authenticity of Kj., it is time to discuss the different methods Rufus uses to diagnose both melancholy and arthritis. I am going also to see if there is any link between diagnosis and therapy and if prognosis ever appears in the accounts of these two diseases.

Melancholy

The principles of Medical Questions are present in the five cases on melancholy of Kj. and the surviving Greek and

⁷⁵ Kj. VI, 3; VII, 6; VIII, 1,5,7; IX, 5; X, 5, 7,8, 10, 17; XVI, 4; XVII, 2, 9-12; XVIII, 4; XX, 2-5.

⁷⁶ Kj. I, II, III. For the appearance of such a sentence in Rufus' other case histories see Medical Questions, p. 40, 47-8; p. 42, 57; p. 44, 67; De Podagra, R.-d., p. 278, 13-14; Orib. Coll. Med., VII, 26, p. 139; ibid., XLV, 30, p. 96. Only in one case does Rufus say that the patient came to see him. See ibid., VI, 38, p. 550.

⁷⁷ Kj. VI, VIII, X, XI, XIV, XVI, XVII, XVIII, XIX. Rufus uses this sentence in Medical Questions (p. 42, 57) and apud ibn al-Maṭrān (Bustān al-aṭibbā, fol. 4b, 11). Rosenthal translates Ibn al-Maṭrān's Arabic version wrongly. He says : Once I was brought a slave whose.... Rosenthal, The Classical Heritage in Islam, p. 204.

⁷⁸ See Kudlien's review of Krankenjournal in Clio Medica, 14, 1979.

Arabic fragments. In Medical Questions Rufus shows a particular interest in the role of the voice in detecting melancholy. He maintains that hoarseness of the patient's voice indicates the presence of the disease. Answering the doctor's questions will show if the patient is bold or distraught which are indicative of melancholy.⁷⁹ In his record of the symptoms of melancholy, Rufus describes the patients as talking fast, lisping and with meagre voices.⁸⁰ At least some of the psychic signs he records such as fear of thunder, the interest in foretelling the future, the hallucination that they have swallowed snakes, their lust for coitus and others are probably recognized through a conversation either with the patient or with some of his relatives.⁸¹ Kj. shows Rufus' knowledge of the history of the case which he has obtained

⁷⁹ Gärtner, Die Fragen des Arztes an den Kranken, p. 26, 4.

⁸⁰ R.-D., fragment no. 70, p. 356, 12; ar-Razi, I, p.76. The editor of ar-Rāzī's text did not emend it. Thus Rufus' sentence is in the negative " they do not lisp" instead of "they lisp". The latin version of ar-Rāzī's book al-Hāwī has instead of " they lisp" this sentence " they are unable to pronounce s but put t instead". This difference could be due to Faraj ibn Salem's own interpretation of the Arabic manuscript in which he was perhaps influenced by Galen. Alternatively, the Arabic manuscript which Faraj used had this sentence while the one used for the Haydarabad's edition of ar-Rāzī's al-Hāwī does not have it. Jeffrey Wollock interprets Rufus' sentence " they pronounce s instead of t" at the light of his study of the influence of the Hippocratic tradition of the link between speech disorder in melancholy on later generations. He makes no mention of the Arabic edition of ar-Rāzī's al-Hāwī and the differences between the Latin and the Arabic. Therefore his interpretation of the occurrence of this sentence in Rufus' text is highly speculative. Cf. Jeffrey Wollock, Speech Disorder in Medical Theories 1300-1630, Oxford, D. Phil. thesis, 1980, pp. 229-231; pp. 235-238.

⁸¹ ar-Rāzī, I, pp. 74-77. For a record of the psychic symptoms of melancholy see Chapter Three.

either from a constant contact with the patient as in case no. I, or more likely, from the patient himself telling his case to Rufus as in case no. II. Yet it is difficult to tell how Rufus learnt about case no. V.⁸² Rufus is also interested in reporting how long the ailment lasts. Moreover he records that the patient is in pain and where the site of the pain is. He also shows a knowledge of the cause of the disease. He in fact, on another occasion, encourages asking about the apparent cause and diet.⁸³ He shows a concern with the patient's previous diseases and treatment. He pays some attention to the patient's character as in cases nos III and V.

By studying the symptoms of melancholy which Rufus records it seems clear that observation is one of his methods of detecting the presence of the disease. Some of the somatic symptoms, e.g. the patient is being unable to open the eyes, the skin is dark coloured, or the body has little hair,⁸⁴ back up such an idea. Some of the psychic symptoms such as fear and distress are knowable through observation. In general Rufus believes that signs declare the beginning of melancholy.⁸⁵ Yet he thinks that the beginning of this disease is difficult to detect. He explains that doctor might ascribe the patient's distress or depression to something other than

⁸² Rufus is quoting cases nos III and IV.

⁸³ ar-Rāzī, I, p. 79.

⁸⁴ Cf. ar-Rāzī, I, p.76. For a study of the somatic and psychic symptoms of melancholy see the section on psychology in Chapter Three.

⁸⁵ ar-Rāzī, I, pp.74-5.

melancholy. Yet he admits this difficulty does not affect the clever doctors.⁸⁶

By reading Ki., a third way of detecting an illness can be noticed. This method is that of physical examination. In case no. I Rufus uses palpation to see whether the spleen has a tumour or not.⁸⁷ He also examines his patient's urine and the stool as in case no. V.

Rufus' method of diagnosis consists of interrogation, observation and examination. He believes that the knowledge of the time of the beginning of the disease influential on the success of the treatment.⁸⁸ He advises the physician to look for a common sign, to start immediately the treatment because it is the easiest in the beginning and difficult when it has taken hold.⁸⁹ He explains that treatment is made more difficult by two circumstances, namely, because the humour has settled in and because it is then difficult for the patient to accept medicines.⁹⁰

The knowledge of what causes the disease makes a

⁸⁶ Rufus, in Ki., occasionally defines what he means by the symptoms of melancholy.

⁸⁷ Rufus uses palpation as a method not only in melancholy but also in some other ailments: suppuration of kidneys and head injuries to examine the presence of tumours. See Sideras, Über die Nieren und Blasenleiden, p. 110, 35; Ibn al-Matran, Bustan al-atibba, fol. 4 b 11. Cf. also Oribasius, Coll. Med., XLV, 11, p. 18, 2.

⁸⁸ ar-Rāzī, I, pp. 74, 76.

⁸⁹ ar-Rāzī, I, p. 76.

⁹⁰ ar-Rāzī, I, p. 74. I have used Rosenthal's translation for the Arabic text. See Franz Rosenthal, The Classical Heritage in Islam, p. 198.

difference in therapy.⁹¹ Also the knowledge of what part of the body is affected influences therapy. If it is only the head which is affected, then there will be no phlebotomy unless the patient is full of blood, while if it is the whole body the doctor applies phlebotomy.⁹²

More interestingly Rufus changes, his treatment as and when various circumstances arise. His treatment is not a rigid but a flexible system which is built on the doctor's knowledge of the case. In case no. I Rufus keeps changing his method of treatment according to his knowledge of the patient's case, the patient's needs and the effectiveness of each treatment applied. Rufus employs his observation, guesses and knowledge in order to secure a successful treatment.⁹³ In case no. V. Rufus builds his treatment of the case on his observation of the patient's evacuation (he has seen the sign of ripening in his urine, and a black humour was going out in the purgation). He thinks that the man is likely to recover because the evacuation of the humour was in the ripening stage and it was not at the beginning. Basing himself upon such knowledge, Rufus uses a combined treatment of humectating the patient's

⁹¹ R.-D., fragment no. 70, p. 357, 18; ar-Razi, I, p. 79. Rufus in the Greek fragment does not tell how different the therapy would be. In the Arabic we have him saying if the cause is an attenuative diet, one uses the opposite in therapy.

⁹² R.-D., p. 357, 17- 358, 23. It is strange that Rufus does not specify how one could recognize whether it is from the head or from the whole body.

⁹³ Kl., I. In Medical Questions Rufus recommends asking about the previous treatment; thereby the physician can reform the present circumstances or keep things unchanged and discover what has been neglected. Gärtner, Die Fragen des Arztes an den Kranken, p.36, 36.

body and refreshing his strength. The result is recovery without evacuation.

It is clear that Rufus' particular interest in these particular points that Medical Questions contains is constant, and is reflected both in his fragments and in Kj. Diagnosis to Rufus means using three methods, interrogation, observation and examination. On the other hand if one turns to looking for prognosis in what concerns melancholy one finds nothing. Only when Rufus declares that there are signs alluding to the nearness of death ⁹⁶ and when he ends his account of case no. V of Kj, saying that he was hopeful of the man's recovery is there an interest in the future. Yet these two occasions are not prognostic in the fullest Hippocratic sense of the word. They reflect Rufus' wide knowledge of various stages of the development of the disease (including death) as well as his medical aspiration for the recovery of his patient. There is no employment of such knowledge to win patients or silence opponents. Nor is there the sort of judgement that the patient is going to die that one can see in the H.C. Finally apart from these two occasions there is no hint of prognosis in the five cases of melancholy in Kj, nor in the surviving Arabic and Greek fragments.

The second disease whose diagnosis we are going to study is arthritis.

⁹⁶ apud ar-Rāzī, Rufus divides signs into some categories: preliminary (vol.I, p. 74-6), those which indicate the causes at which the treatment aims(vol.I, p. 76-7), those which indicate recovery (vol.I, p. 79), and those which proclaim death (vol.I, p. 74).

Arthritis

The Latin version of the text On Joint diseases is divided into sections, one of which is headed *De cognoscenda passione*. The first evidence of applying the method of questioning the patient comes when Rufus asks about the nature of the pain and, upon receiving an affirmative answer, draws a picture of the treatment of the disease.⁹⁵ Rufus' interest in the significance of pains is evident in the prologue when he writes that the pain are neither excessive nor bad in the beginning of the disease; then when the disease returns they become great.⁹⁶ Periodicity of the disease is the second evident element from medical questions. He warns the reader not to think that the disease has stopped, for it will of necessity return in time for, like other diseases, it has its own periods.⁹⁷ Also the realization of the time element lies behind his exhortation of a quick treatment.⁹⁸ Yet he also gives an account of some signs such as the signs of an abundance of blood in the joints.⁹⁹ His signs convey two

⁹⁵ R.-D., pp. 251-2, 1-4. *Si ergo articulus indoluerit, interrogandus est si non percussit alicubi locum qui dolet. Quid si negaverit...*

⁹⁶ *Ibid.*, pp. 250-1, 3-6.

⁹⁷ *Ibid.*, p. 252, 7. *Etsi iam perfecte pausaverit in eis passio, non oportet credere; revertitur enim iterum in tempore necessitatis, quia, ut aliae aegritudines, circuitus suos ita habet. See also *ibid.*, p. 250, 3.*

⁹⁸ ar-Rāzī, XI, p. 216; R.-D., p. 251, 4.

⁹⁹ *Ibid.*, pp. 281-2, 3-4. *Rubrus fit color circa pedem, tumores autem exurgunt in pedibus, et venae iutumescunt, et totus pes ignitus est, dolet, et, cum infrigidatur, gaudent.*

methods : observation and also a conversation with the patient in order to learn that the latter rejoices when a refrigerant is applied on his pained feet.¹⁰⁰

The importance of recognizing the disease early is justified by the easiness of treatment, while the difficulty and further complications occur when it is not treated in the beginning. He says :

One should not linger in dissolving it (the humidity) from the joints because if it remains for a while it will be difficult to get rid of it, and it will become stony especially in those who do not exercise.¹⁰¹

He even prescribes a few things to be applied in the beginning of the disease.¹⁰²

Upon the symptoms treatment also depends. Those who have cold pains need different therapy from those who have hot ones.¹⁰³ If they feel heat in their joints, Rufus recommends bleeding and for those who feel cold he prefers cautery.¹⁰⁴

Also the presence of some tumours determines treatment.¹⁰⁵ Rufus prescribes a different treatment for the

¹⁰⁰ Ibid.

¹⁰¹ ar-Rāzī, XI, p. 216. In De Podagra he says : *mox autem si iterum atque iterum fuerit regressus dolor, amplius infusus invenies articulos, et non est iam facile curare.* R.-D., p. 251, 4. He also warns against neglecting treatment before the second or the third attack occurs. Ibid., p. 253, 9.

¹⁰² Rufus prescribes an abstinence from food, clysters and cutting the vein. Ibid., pp. 251-2, 1-6. Bandages are also prescribed. ar-Rāzī, XI, p.219

¹⁰³ ar-Rāzī, XI, p. 162; p. 219. The bandage of mustard is prescribed for cold pains while it is prohibited for the hot one. No exercises are prescribed for the hot pains while they should not be abandoned in the cold ones.

¹⁰⁴ Ibid., p. 162.

¹⁰⁵ Ibid., p. 216.

patient who has a tumour in the joints accompanied with heat ¹⁰⁶ from the patient who has neither a tumour nor heat in his joints.¹⁰⁷ If the patient has a phlegmone in the joints and he is sedentary, Rufus prescribes a tender diet and warns against drinking wine or else other bad maladies will follow.¹⁰⁸

In treating joints which have much humidity pouring into them, he prescribes bandages with some peculiar ingredients and warns against its excess.¹⁰⁹

Also treatment differs according to the affected part of the body. If the affected part is the leg, vomiting is better, and if the pain is in the upper part it will be purgatives.¹¹⁰ If the upper parts have pains, the doctor exercises the lower and if it is the lower parts, he exercises the upper, and if it is both of them he uses rubbing.¹¹¹ He also applies the preventive bandages over the spot where he wants to prevent the disease returning. If it is the foot, the bandage is on the leg and if it is the joint of the forearm he puts it on the arm.¹¹² In the beginning the doctor bandages

¹⁰⁶ Ibid., p. 162. It is the same therapy prescribed for those who have tumours. Yet In this passage the tumour is described as hot.

¹⁰⁷ Ibid., p. 216.

¹⁰⁸ Ibid., p. 219.

¹⁰⁹ Ibid.

¹¹⁰ Ibid., p. 219; R.-D., p. 269, 5.

¹¹¹ ar-Rāzī, XI, p. 216; R.-D., p. 253, 1-3. While the Arabic version uses the term "pain of the joints" to mean the disease arthritis, the Latin mentions the term nodi.

¹¹² ar-Rāzī, XI, p. 162.

to prevent the in-pouring of fluid. If it is in the hand, he applies it on the arm, while if it is in the heel, he uses it on the leg.¹¹³

Also treatment depends on the quality of the pain.¹¹⁴ Few things are prescribed for pain.¹¹⁵ When it becomes chronic and the body is clean one anoints.¹¹⁶ Also if the sites of the gout ulcerate, it will be difficult to cure and fluids of different colours will pour from it.¹¹⁷ Also it depends on the state of the joints. Baths are permitted when the joints are drier¹¹⁸, while drying remedies are prescribed for humid joints¹¹⁹, and fomentations for loosening joints and in-flowing humours.¹²⁰ It is also left to the discretion of the doctors.¹²¹ In those who complain about some hardness, humid bandages are good.¹²² If they also suffer from repletion one also uses bandages.¹²³ Moreover Rufus provides a justification for the application of most

¹¹³ Ibid., p. 162, p.219.

¹¹⁴ Optimum autem et hoc ab his fricare, in quo sunt fortiores dolores. R.-D., p. 255, 7-8.

¹¹⁵ Ibid., p. 286, 3-5.

¹¹⁶ ar-Rāzī, XI, p. 219.

¹¹⁷ Ibid., p. 180.

¹¹⁸ R.-D., p. 256, 1.

¹¹⁹ Ibid., pp. 288-9.

¹²⁰ Ibid., pp. 289-90.

¹²¹ Et si tibi videtur quia sanguis superabundat in veritate...Ibid., p. 279, 1-2.

¹²² ar-Rāzī, XI, p. 219.

¹²³ Ibid.

items of his treatment.¹²⁴ It is notable that prognosis does not appear in this work.

Conclusion

Studying Rufus' accounts of melancholy and arthritis have shown us that Rufus uses three methods of diagnosis. These are : interrogation, observation and examination. He seems to be consistent both in using such tools of diagnosis and in paying attention to the principles of Medical Questions in his encounter with a psychosomatic illness such as melancholy and also a somatic illness such as arthritis.¹²⁵ On employing these three methods Rufus seems to be influenced by Hippocrates. As we know the Hippocratic Corpus contains three methods :inquiry, examination and observation.¹²⁶ Yet Rufus deviates from Hippocrates in paying prognosis a lesser interest. Rufus' retreat from prognosis can be explained in three ways. First Rufus' Hellenistic world is wider than the Hellenic world of Hippocrates. The physician cannot learn everything about the disease, his patient and his environment by relying only on the authority of the medical texts mainly Hippocratic. He needs to seek, besides medical texts, other

¹²⁴ R.-D., pp. 251-2, 1-6.

¹²⁵ The German medical dissertation of Henrike Thomssen, which has appeared in 1989, has shown Rufus' consistency in paying attention to Medical Questions' principles as far as his surviving treatises are concerned. Apparently she has concentrated her efforts on Rufus' works that survive in their entirety and her dissertation does not bring any mention of any fragments except for three nos. 63, 66 and 85.

¹²⁶ Heidel, Hippocratic Medicine, pp. 65-6.

media. By interrogation the doctor would learn more but his ability to prognosticate would be restricted. Secondly, prognosis had for the Hippocratics a social value. For a modest physician such as Rufus the need to impress patients and their families and to silence opponents is not pressing. Thirdly, Rufus believes in the efficacy of his therapy. By giving patients the correct treatment at the right time, recovery will be obtained. His surviving works with their emphasis on therapy back up this conclusion.

Rufus links the beginning of therapy with the promptness of the recognition of the disease. His therapy is also linked with recognizing the affected part. It is a flexible system, based on Rufus' knowledge of the patient, his needs and the developments in his case. In the following chapter I shall be concentrating on studying Rufus' treatment of three different diseases; lithiasis of the kidneys and bladder, jaundice and again melancholy. I shall also be giving an account of one of Rufus' recipes which was very popular in the Middle Ages i.e. *hiera Rufi*. My aim will be to identify more of the characteristics of Rufus' therapy.

Chapter Five. Therapy

Chapter Five Therapy

Introduction

I have already discussed Rufus' explanation of the occurrence of disease, and shown that there are various factors Rufus holds responsible. One disease can be explained by a combination of factors, whereas others are generated by only a single factor. I have also discussed the relation between these factors and humoral pathology. I have given as well some attention to Rufus' ways of recognizing specific diseases. The method of recognition (diagnosis) has been discussed in relation to a rather loose term i.e. prognosis. The logical consequence of my study necessarily leads me now to talk about Rufus' measures of therapy. It is well understood that after a doctor has identified a disease, and recognized its causes he needs to work for its therapy. Rufus himself spells out in Medical Questions the link between the method he prefers of learning about the patient's case with securing a better therapy. Moreover the quantity of Rufus' surviving therapeutic and dietetic works is significant.¹ It suggests, among other things, Rufus' interest in dietetic and therapeutic medicine. Sound therapy is one of many special skills Rufus possesses and for that reason is worth discussing in order to identify correctly his place in ancient medicine. These therapeutic and dietetic fragments also indicate the excerptors' preference for some materials at the expense of

¹ See Chapter One.

others. Such preference reflects the interests of late antiquity and the peculiar nature of the transmission from Greek into Arabic in particular. It also reflects that the goal of medicine and doctors is to cure.

In this chapter I am going to study Rufus' therapeutic measures in relation to three diseases i.e. stones in the kidneys and bladder, jaundice, and melancholy. A special section is going to be devoted to one of his recipes Hiera Rufi which was very popular throughout the Middle Ages.

I shall focus in particular on the following questions : does Rufus concentrate in his therapy on eliminating the causes of the disease already identified by him, and in particular humours? What are his methods of treatment ? Do they differ from one disease to another? Does each stage of treatment need a specific measure? What is the particular place of diet, surgery, and pharmacology in his treatment? What information does Rufus give about the measurement of the doses of drugs, their components, ways of preparation, and time of prescription ? and, finally, to what extent does Rufus advocate preventive medicine?

I Stones in the kidneys and bladder

I have already discussed Rufus' explanation for the occurrence of this disease in the second chapter. Rufus blames particular kinds of water with the help of external heat and cold as well as undigested food for the generation of the disease. Here I am going to see how he treats it. The

materials comes from Rufus' work On the Diseases of the Kidneys and Bladder, which is one of Rufus' few surviving complete Greek works. There are also Greek and Arabic fragments whose authenticity and content will be discussed later in this chapter.

A. Stones in the kidneys

Rufus dedicates the largest part of the section on stones in the kidneys in his book Diseases of the Kidneys and Bladder to therapy.²

His therapy consists of only a few measures which are both external (cataplasms, fomentations and surgery) and internal (diuretics, clysters and lithotriptics).³ They belong to the realms of pharmacology and surgery. Rufus is aware of the value of almost each method he chooses to use. His choice is also based on his knowledge of the case he treats. His aim is either to crush stones within the body itself or to try to give the patients what will make them evacuate them in the urine or, if only necessary to extract

² Alexander Sideras, Über die Nieren und Blasenleiden, pp. 118-122, 15-25. Rufus deals in this section with some of the signs of lithiasis in the kidneys (*ibid.*, p. 112, 1-2; pp. 116-8, 11-14); the dangerous effects of having stones (pp.112-4, 2); and the factors that determine the degree of danger or its absence (p. 114, 3-4). He discusses briefly the relationship between lithiasis and colitis (p. 114, 6-7) and compares between the symptoms of the stones in the kidneys and those in bladder (pp. 116-8, 11-13). He explains why women are less liable to develop the disease than men (p. 116, 8-10) then he turns to therapy.

³ I am using here the modern term to signify the drugs Rufus prescribes to crush stones.

them by means of surgery. In general he is reluctant to operate.

Let us discuss each point. Rufus prescribes, for those who have pains and stones in their urine, infusion of rue, cataplasms ⁴, and diuretics.⁵ He clearly states that, for most of the patients, infusion and cataplasms are by themselves enough to expel the stones yet he prescribes also some diuretics apparently for the same reason.

When the stones are big, and there are sharp pains and urine retention Rufus prescribes lithotriptics.⁶ Yet there are conditions which favour the involvement of surgery. In a specific case, he records, Rufus had had to drag out the stone with forceps or else the patient would have died.⁷ If it is not possible to drag it out (Rufus does not explain why it is impossible) he recommends cutting the urethra with an oblong downward cut *Τὴν παραμύκη ἐνώθεν* to remove the stone. Yet the urethra should not be cut without any necessity, for it may

⁴ Ibid., p. 118, 15-16.

⁵ Ibid., p. 120, 17.

⁶ Ibid., p. 120, 18-19. Adams, while stating that Caelius Aurelianus makes no mention of them, attributes the use of lithotriptics to Galen, Alexander of Tralles, ar-Razi, ibn Sina, ibn Sarabiyun and Al-Zahrawi. Francis Adams, The Seven Books of Paul of Aegina, vol.I, pp. 549-551.

⁷ Alexander Sideras, Über die Nieren und Blasenleiden, p. 120, 20-21.

create a fistula which accumulates urine inside.⁸ If stones stick together and the urine is retained he prescribes lithotriptics, affusion, and some diuretics. Frequent or large drinks and diuretics are prohibited while fomentations and emptying the belly with clysters are recommended so that there will be no pressure on the ureters.⁹

In other words, lithotriptics are recommended when the case is not serious. When the doctor is facing a more serious situation, he has either to pull the stone out or cut the urethra to remove it.

After the stone has been evacuated Rufus prescribes drinking some milk : asses' milk best, then the horses' then goat's milk with honey.¹⁰ Then the patient is given the same diet that is given for ulcers in the kidneys. Such a diet is composed of drinking milk, eating porridge and soups, vegetables, meat, and wine. If there is repletion, emetics and dry vapour baths are recommended. Rubbing, baths, and warm coverings are also recommended. The patient is then led to

⁸ Ibid., pp. 120-122, 21. εἰ δὲ μὴ οὕτως ἐξελκύσαι οἶον
τε ἤν, τέμνειν διελογιζόμεθα ἰσμήν παρρηγῆν ἄνωθεν.
τὸν γὰρ οὐρητήρα, ἔπου μὴ μεγάλη ἀνάγκη, οὐχ ἔχῃ τέμνειν
συριγγούται γὰρ τοῦ λίπαν καὶ ὕστερον ταύτη ὑπεῖδιν.

⁹ Ibid., p. 122, 22-23. Notice that Rufus' warning is for prevention.

¹⁰ Ibid., p. 122, 24. It is noteworthy that though Hippocrates considers milk as a cause of the formation of the stones Rufus recommends using milk after the stone is evacuated. See chapter Two. Adams says that Aetius like most of the ancient authorities says that milk, with the exception of that of asses contributes to the formation of stones. Adams, op. cit., vol.I, p.550.

exercise.¹¹

Rufus pays prevention his attention.¹² He rules that moderation and digestion of food are the best therapy. For repletion and indigestion not only intensify the disease but also lead up to it. Therefore Rufus recommends a particular diet which does not include kinds of food which create indigestion or repletion. He also recommends vomiting frequently after meals, using purgatives, and drinking absinthe more often. He is also interested in the type of water to be used for drinking and for medicine and also the best types of wine. Diuretics, lithotriptics and drinking hellebore are parts of his diet. Some of these diuretics are to be taken for the day while others for a longer period. In addition exercises and rubbing, sometimes with and sometimes without fat, with medicaments and with other stuff are recommended.¹³ It is clear that some of Rufus' dietetic measures we have already encountered in therapy. They are prescribed for both therapy and prevention. They reflect the double nature of Greek diet in general i.e. to prevent and to cure as well.

Rufus' interest in preventing stone formation in the kidneys is also evident in four short fragments from his book

¹¹ Alexander Sideras, Über die Nieren und Blasenleiden, pp. 106-110, 22-34.

¹² Ibid., pp. 122-126, 26-33.

¹³ Ibid.

To the laymen.¹⁴ In the first fragment Rufus says :

[In a patient] who makes black urine without a disease or pain, stone will be created shortly in his kidney especially if he is an old man. So let the doctor hasten to give him either something to help or diuretics and order him to relax, for much toil engenders stones in the kidneys.¹⁵

Diuretics, drinks and rest are Rufus' preventative methods. We have already encountered the curative roles of both diuretics and drinks in Rufus' treatise On the Diseases of the Kidneys and Bladder. It is possible to understand Rufus' recommendation of less exercise in relation with his ideas of how exercise provides the body with some heat, which plays a role in the formation of stones. One must not confuse Rufus'

¹⁴ ar-Rāzī, X, p. 109, 131, 141. XIX, p. 85. The fragments fall into two groups. While frg. p. 109 and frg. p. 141 are almost identical, those of p. 131 and p. 85 are almost identical. The two groups differ in a few details from each other.

¹⁵ ar-Rāzī, X, p. 109. In p. 141 Rufus says: [In a patient] who makes black water with or without (pain-disease) stones will be shortly created in his kidney especially if he is an old man, let him be helped with drinking whey or diuretics and less toil, for much of it creates this disease." In pp. 131, 85. We have this version : who makes black water though he is sound(for a while) stone will be created in his body (shortly). Rufus takes black urine as an alarming sign for the generation of stones in the kidneys. Rufus, in his work On the Diseases of the Kidneys and Bladder, talks about the difference of meaning of black urine in melancholic old people in winter and autumn in comparison with black urine in phlegmatic young people in summer and spring. Rufus rules that in the former black urine is less dangerous than in the latter. Sideras, Über die Nieren und Blasenleiden, p. 114, 4. Also in the same Greek text Rufus says that black urine is a sign of the end of this disease. Ibid., p. 112, 2 (ar-Rāzī, XIX, pp. 146, 152). Perhaps, in order to resolve this confusion, one can suggest that Rufus differentiates between two stages: the beginning and the end of the disease. It is dangerous to have black urine in the beginning, while it is not so at the end. Rufus himself says that in the end of lithiasis this (black urine) could contain some of the noxious materials- which their bodies have- but which did not go out in faeces. Sideras, Über die Nieren und Blasenleiden, p. 114, 4.

deterrence from using exercise here with his recommendation elsewhere (in diet) of leading the patient into exercise. In diet exercise is recommended in order to restore the patient to health at the end of the disease while, here the disease is still in the process of developing and it will be risky to provide the patient with some heat that makes the creation of stones inevitable.

Yet there is a probability that the stone, despite all the efforts, is not being evacuated as Rufus says:

εἰ δὲ μὴ ἐπι τούτοις παύσῃτο ἡ νόσος, συγγραΐσκει.

16

Rufus means by " if the disease does not stop" that if the stone is not evacuated. The non-evacuation of the stone means that the patient is going to have it in his body all his life.¹⁷ It announces the incurability of the case, but Rufus does not explain why the disease becomes incurable. The incurability of the disease (the patient can grow old with it) stands in comparison with the deadly character Rufus attributes to the disease at the beginning of this section. Rufus, I believe, means by calling the disease in the beginning deadly to show how dangerous this disease could be

¹⁶ Ibid., p. 126, 33.

¹⁷ von Staden interprets the use of the verb in the Hippocratic corpus as denoting the incurable disease as an agent which has an active entity with a life of its own. He maintains that giving the incurable disease a life of its own makes it along with the healers contestants in the agon for incurability and health. Heinrich von Staden, " Incurability and Hopelessness : The Hippocratic Corpus" in La Maladie et les Maladies dans le Collection hippocratique. Edition préparée par Paul Potter, Gilles Maloney, Jacques Desautels, Québec, 1990, p. 99.

in certain circumstances. On the other hand, the disease can grow old with the patient if the doctor gives him some treatment, and if the patient cannot benefit from it for some reason.¹⁸

In the following section, we are going to discuss the measures by which Rufus treats stones in bladder and see how different they are from those in the kidneys.

B. Stones in the bladder

Without any justification Rufus dedicates two successive sections in his work On the Diseases of the Kidneys and Bladder to stones in bladder. The first sentence of the first section declares that its interest is "Λιθίασις κύστεως" ¹⁹, while the second mentions "πῶρα κύστεως" ²⁰. The reader can speculate that Rufus perhaps meant to distinguish between two kinds of stones. Rufus, in fact in the beginning of the section on stones of kidneys, describes stones λίθοι as similar to tuff stones πυρίδι ²¹. Yet it is also likely that Rufus meant,

¹⁸ von Staden maintains that there is an absence of fixed boundaries between curability and incurability in the Hippocratic corpus. Ibid., p. 82. He believes that the incurability of a disease in the H.C. is explained by six factors. These are a patient error; physician error; limitations of the patient's tools; natural defects; congenital and hereditary defects; and accidental trauma inflicted upon an otherwise healthy person. Ibid., pp. 85-97.

¹⁹ Alexander Sideras, Über die Nieren und Blasenleiden, pp. 148-152, 1-12.

²⁰ Ibid., pp. 152-158, 13-24.

²¹ Ibid., p. 112, 1.

by looking at the content of the two sections, to discuss in the first therapy while in the second prevention.

In the first section, unlike the section of stones in the kidneys, Rufus sets out from the beginning with treatment. His treatment consists of drugs ²², surgery and some alternatives for it.²³ He describes in a much more detail than in the kidneys how to operate.²⁴

There are a few interesting points about Rufus' therapy. First, Rufus is aware of the value of his therapeutic measures. He states that drugs are used to expel stones. Second, he is aware of the need of introducing a particular measure at a particular stage. For instance, drugs are prescribed for the beginning *κατ' ἀρχάς*.²⁵ Third, his choice of the best therapeutic measure is based on his knowledge of the case. Surgery is prescribed if the patient is unable to make water because there are great and solid stones under which the bladder has ulcerated and because the patient suffers difficulty in making water especially if the stones fix themselves in the urethra.²⁶ Yet he does not recommend operation in every case. On the contrary he gives alternatives for it. He says if the doctor does not want to operate, he can drive the stone back with the pipe. The second alternative

²² Ibid., p. 148, 1.

²³ Ibid., pp. 148-150, 2-3. Rufus mentions some signs of stones in bladder. Ibid., p. 150, 3-6.

²⁴ Ibid., p. 152, 7-12.

²⁵ Ibid., p. 148, 1.

²⁶ Ibid., pp. 148-150, 2.

which for some patients, is sufficient is to toss and jostle the patient so that the stone will keep out of the urethra and the patient will then be able to make water.²⁷

How to perform this operation is worth mentioning here.²⁸ He says :

Bend the patient backwards and order him to bend his feet as much as he can. Put his feet as far apart as seems fit. Insert the fingers of the left hand very far in the rectum and touch the bladder with the fingers, while some one is standing by pressing the belly, until you find the stone.

Rufus carries on saying that the doctor can insert one finger only if he is experienced, if his finger is long, if the patient is a child and if the stone is no bigger than the usual. Going back to the operation Rufus says:

One should drag the stone into the urethra and hold it there and then make a transverse cut *τομή ἐπιπέδου* at the perineum. If it is convenient, one pulls it with the handle. If not, one uses the tool found for such things.

Yet he warns against making a big cut, for that is dangerous and it hurts the bladder itself.²⁹ The rest is to be done as in treating wounds.

In the second section, also dedicated to stones in the bladder, Rufus declares that the knowledge of causation of

²⁷ Ibid., p. 150, 3.

²⁸ Adams describes lithotomy in Celsus whom he calls the first medical author who mentioned the operation. Adams, while giving accounts of the operation among the Greeks and the Arabs, does not mention that Rufus described this operation. It is interesting to note that they all agree on the presence of some assistants in the operations and on the shape of the cut and its place (oblique incision in the perineum)-Rufus in fact talks about transverse-. Adams, op. cit., vol. II, pp. 356-363.

²⁹ Sideras, op. cit., p. 152, 7-12.

stone formation is important for both diet and prevention.³⁰ He states that water with sediments, excessive cold and hard water engender stones in the bladder. His knowledge is based on observing the colour of the urine.³¹ Besides it occurs in children more than adults because they drink more cold water which is suitable for those who are growing up. In addition to water Rufus believes that undigested food is also another cause of stone formation.³²

Other causes include the influence of heat and cold on the bladder. He bases his knowledge of the influence of heat on the bladder in the process of stone formation by observing the colour of the evacuated stones. He says :

I cannot give proofs of this disease except the colour of stones, which resembles burnt ostraka.³³

Having identified the bladder's quality Rufus prescribes a diet that is suitable for prevention. It follows the rule of *contraria contrariis*. If the bladder is warm, Rufus prescribes colder diuretics, and frequent vomiting after food. He warns against fiery stuff that warms the bladder and recommends a less tiring diet.³⁴ If cold supervenes he prescribes warmer

³⁰ Ibid., p. 152, 13.

³¹ Ibid., p. 154, 15-16. τούτους δὲ ὕλης ἀπήθημα ἴγούμαι ψυχροτέρας εἶναι τὰ πολλὰ καὶ τῆ χροιά αὐτῶν τε κμαϊρόμενος τοῖς τε οὖροις λεπτοῖς καὶ ὕδασι οἷσι.

³² Ibid., p. 154, 16.

³³ Ibid., p. 156, 17-18. ἀλλ' ἐγὼ τεκμήρια οὐκ ἔχω εἰπεῖν τῆςδε τῆς νόσου, εἰ μὴ ἄρα τῆν χροιάν τῶν πωριδίων.

³⁴ Ibid., p. 156, 18-19.

diuretics. He specifies the good type of water, especially clear spring water and wine. He is also concerned with securing a good digestion. Therefore he warns against repletion and indigestion. Exercises, frequent anointing and rubbing the belly while standing by a fire are recommended. Washing should be infrequent. Cold baths are good while hot are the worst.³⁵

Greek and Arabic fragments provide us with more information on how Rufus treats lithiasis. ar-Rāzī does not give the title of Rufus' work which he quotes. He attributes to Rufus the saying that sulphuric baths crush stones very much.³⁶ Unfortunately this fragment does not specify the affected organ: kidneys or bladder? Baths, though they are not recommended for the kidneys in the Greek text, are recommended for the stones in the bladder. Nevertheless baths are widely recommended by Rufus in other diseases such as arthritis and it is not absolutely impossible that Rufus recommends it also for the kidneys.

Another Arabic fragment comes from ibn al-Jazzār's book Zād al-Musafir wa Ūt al-Ḥadīr.³⁷ Ibn al-Jazzār attributes to both Dioscorides and Rufus a recipe for lithotriptics. He says:

If one drinks the stones, that are inside sponges, a measure of one Drachm ground with (wine) and hot water it

³⁵ Ibid., pp. 156-8, 20-24.

³⁶ ar-Rāzī, al-Ḥawī, X, p. 149.

³⁷ Bodl. I 559 (= Hunt. 302), p. 145; Dresden 209, fol. 208 r.

will crush the stones.³⁸

There are many interesting things about this fragment. It does not specify the affected organ. Yet it is more likely that the affected part is the kidneys for we have not encountered any prescription of lithotriptics for the bladder. The way this fragment starts suggests that Ibn al-Jazzār has either read Rufus' and Dioscorides' works, or perhaps an Arabic work in which this recipe appears, or he has read Rufus who in his turn has quoted Dioscorides.

Let us look at the recipe's content. The first ingredient of the recipe stones in the sponges, is mentioned by Dioscorides in his Materia Medica.³⁹ Yet Rufus does not mention it in his work On the Diseases of the Kidneys and Bladder.⁴⁰ It is possible that this recipe is mentioned in his book To the Laymen or somewhere else. We know very well that Rufus had read Dioscorides for we have a fragment that testifies to that.⁴¹ Hence the possibility that Rufus is using Dioscorides here is not ruled out. Whether Ibn al-Jazzār knows this recipe directly or indirectly does not reduce the valuable information it comprises.

³⁸ It is evident from Dresden manuscript, whose style is clearer than that of Bodleian, that what follows the first recipe of recommended lithotriptics does not belong to these two Greek authors.

³⁹ Max Wellmann, Pedannii Dioscoridis anazarbei De materia medica libri quinque, vol. III, Berlin, 1914, p. 101.

⁴⁰ It also appears in Paul of Aegina's work among the lithotriptics he recommends. See R.-D., frg. 117, p. 445, 16.

⁴¹ Orib., Coll. Med. V, 12, p. 359, 1.

The Greek fragment is fragment no.117 in R.-D.'s edition.⁴² It deals with stones in the kidneys and bladder, some of the symptomatic differences between colitis and lithiasis in the kidneys, and, the greater part of it therapy. R.-D. includes it among Rufus' authentic fragments. Sideras, on the other hand, thinks that Paul uses as his main source Oribasius, not Rufus' original text and mixes it with extracts he borrowed from Aetius and Alexander of Tralles. He identifies in Paul's work the intact surviving bits of Rufus' original text. The section on stones in the kidneys and bladder is not one of these sections.⁴³ Yet there is a section in this fragment which corresponds to a passage in ar-Rāzī's al-Hāwī. The two passages discuss the symptomatic differences between colitis and nephritis. Identifying the author of the Arabic text is not easy because ar-Razi does not mention any authority. But a look at the preceding section in ar-Rāzī's, which has Rufus' lemma, makes it possible to attribute it to Rufus. Yet it is not convincing to base a judgement exclusively on a lemma of a preceding chapter despite the belief in Rufus' knowledge of such a topic as is evident from his work On the Diseases of the Kidneys and Bladder.⁴⁴ I think it is more likely that this Arabic text belongs to Paul. It is possible that Paul has been influenced by Rufus in this particular passage. Hence I agree with Sideras in excluding

⁴² Ruelle and Daremberg in their edition of Rufus' texts have included Aetius' and Alexander's relevant texts for helping in reading Rufus' work. Yet they have also acknowledged that at times they do not belong to Rufus.

⁴³ Alexander Sideras, Über die Nieren und Blasenleiden, pp. 68-9.

⁴⁴ It is also evident in ar-Razi, X, p. 196; VIII, p. 218.

this fragment from Rufus' intact surviving bits of the original text.

Conclusion

Rufus, as we have seen, is interested in lithiasis of kidneys and bladder. He discusses it not only in his work On the Diseases of the Kidneys and Bladder but also in his work To the Laymen. His concern is with its causes, symptoms and treatment. Treatment occupies in his work a larger part than causes and symptoms. He links causes with both treatment and prevention. The most important thing about prevention is to use a moderate diet. His treatment consists of pharmacology, diet and surgery. The principle behind his treatment is "contraria contrariis". The differences between his treatment of lithiasis of the kidneys and that of the bladder are not large. Lithotriptics are absent in the latter, while surgery occupies a more important part in bladder-stone than in kidneys. Rufus mentions that the shape of the cut in the case of the kidneys is oblong (at the urethra), while it is for bladder stone transverse at the perineum. The absence of bloodletting and cautery is conspicuous in both. It is also worth noting that Rufus makes some cross references between the two sections and also between the two sections and the section on ulcers of the kidneys.

His attitude towards surgery is worth some discussion here. Rufus, though he prescribes it, is reluctant to take it as a first option. He in fact gives sometimes some alternatives for it. If one looks at Rufus' other works one finds that he cuts

the perineum not only for lithiasis but also to remove blood clots in the bladder.⁴⁵ Rufus operates not only for therapeutic purpose but also for diagnostic as in the case of the Samian already mentioned in his work Medical Questions.⁴⁶ Rufus operates to see if there is a broken bone in the skull. Rufus also talks about some easily separated parts as in the case of uvula, tonsils and omentum.⁴⁷ He also recommends some kinds of food such as whey or some methods of treatment to be introduced after surgery.⁴⁸ Nevertheless, we have other materials which contradict this picture. Rufus highlights the mistake of a surgeon, who, in fear of some haemorrhage from it, tied the seminal vessel in the operation. He in fact exposed it to spasm and the patient to death.⁴⁹ He does not recommend operating in carcinoma for fear of ulcer.⁵⁰ Rufus, though he declares his understanding of the value of operating in kidney suppuration and lithiasis as performed by Hippocrates and Euryodes, distances himself from this practice.⁵¹ Rufus' position towards operative intervention can be summarised in his own words. He admits the value of surgery

⁴⁵ Sideras, Über die Nieren und Blasenleiden, p. 142, 6; ar-Razi, X, p. 88.

⁴⁶ Gärtner, Die Fragen des Arztes an den Kranken, p. 42, 58.

⁴⁷ R.-D., p. 173, 21-22; p. 181, 53-55.

⁴⁸ Ibn al-Baitār, IV, p. 132. Celery is in an-Nuwairī, p. 84. Clysters is in Orib., Coll. Med., VIII, 24, p. 205, 4; p. 206, 7; p. 210, 22.

⁴⁹ R.-D., p. 68, 10.

⁵⁰ Orib., Coll. Med., XLV, 11, p. 19, 5.

⁵¹ Sideras, Über die Nieren und Blasenleiden, p. 112, 36.

in case of phthisis and says:

ὅπου γε μὴν καὶ ἄλλων ἰαμάτων ἐστὶν εὐτορεῖν
οὐ κατὰ ἐκόντας ἐνταῦθα τὰ ἔσχατα ἐξευρίσκειν.

One should not voluntarily seek the extreme measures while others are available.⁵²

The second disease whose therapy we are going to discuss is jaundice.

II Jaundice

In 1983 Ullmann edited, translated (into German), and published for the first time an Arabic version of Rufus' work On Jaundice.⁵³ The Greek original work has been lost except for a few quotations in Aetius' work. Ullmann listed these Greek fragments⁵⁴ along with some Arabic fragments attributed to Rufus by ar-Rāzī and aṭ-Ṭabarī.⁵⁵ He has also included a latin version of Rufus' work, which has been falsely

⁵² Ibid., p. 112, 37.

⁵³ Manfred Ullmann, Die Schrift des Rufus von Ephesos über die Gelbsucht: in arabischer und lateinischer Übersetzung, pp. 32-40. This Arabic version is the only surviving (complete) Arabic version of a text of Rufus. For a discussion of the authenticity of Kj, see Chapter Four.

⁵⁴ Ibid., pp. 20-23. Ruelle and Daremberg, in their 1879 edition of Rufus' works, have included some of these quotations among Rufus' fragments under the nos. 79 and 80. Fragment no. 79, which deals with aetiology and symptoms, has Rufus' and Galen's lemmata. In fragment no.80 which deals with therapy Rufus' name is mentioned twice. Ullmann has studied Aetius' Greek text and a sixteenth century latin translation of it, in comparison with Rufus' latin and Arabic texts to discover more points of correspondence between those texts than Ruelle and Daremberg admit. Hence he has raised the possible number of Rufus' Greek fragments up to 19.

⁵⁵ Ibid., p. 30; pp. 85-87.

attributed by Latin scribes to Galen.⁵⁶

Rufus dedicates a large part of his work On Jaundice to therapy, diet, and what the doctor should do if the disease lingers.⁵⁷

Rufus' therapy includes purgation, bloodletting, vomiting, cupping, cataplasms, and cerate. They belong to the spheres of surgery and pharmacology.

There are a few points about Rufus' therapy. Rufus' knowledge of the seat of the disease, the patient's case and individuality, and also the stages the disease goes into influence his choice of the method of therapy.

I shall discuss each point in detail. Rufus believes that therapy differs according to the affected organ : the liver or

⁵⁶ Ibid., pp. 51-58. For a full discussion of authenticity and modern scholars' opinions of these texts see *ibid.*, pp. 11-20, 42-51, 83-84.

I agree with Ullmann who argues that points of correspondence and differences between the Arabic and latin versions and also the Greek fragments, in addition to the Grecism of the latin version suggest that the two texts independently come directly from a more complete Greek work. *Ibid.*, pp. 19, 47.

⁵⁷ Therapy 14-39; diet 40-68; and for lingering 68-77. The Arabic version starts off with a definition and division of jaundice into two kinds according to the affected organ, either the liver or the spleen. There are specific symptoms of each type as well as common. 1-13. Greek fragment no.1 in Ullmann's edition =10-11. This section is missing in latin.

Arabic fragment no.4 (p. 87) gives more signs of the disease. It differentiates between two types of jaundice according to the safety of the signs. In the safe type the testicles do not swell and the colour of the spittle (saliva) does not change. The worst is when there is loosening of nature (diarrhoea) and fever.

at-Tabari does not mention Rufus' work which he quotes. Ullmann is puzzled how these Arabic fragments discuss jaundice and at the same time do not appear in the Arabic version of the text. He concludes that the Arabic version is not the source for these Arabic fragments. See *ibid.*, p. 83. I agree with him. I would like also to suggest as a source Rufus' work To the Laymen where jaundice is likely to have been discussed.

the spleen. He recommends cupping glass for those who have jaundice from the liver. Yet he forbids its use in the spleen.⁵⁸ He uses anatomy to explain his choice. He says that applying cupping glass in the case of the liver is acceptable because there is a relation between the flanks and the liver while there is not any between the spleen and the flanks.⁵⁹ He also encourages using emetics instead of purgatives if the patient cannot accept purgation. He explains that liver can be evacuated by purgation as well as by emetics.⁶⁰ His explanation implies that emetics is specifically directed at the liver.

Not only does the knowledge of the seat of the disease have an impact on Rufus' choice of therapy but also his knowledge of the patient's case. Whether the patient has tumours or pain and its seats, and the state of the humours, in particular blood and bile in the body are influential

⁵⁸ The Latin version (26 a) and the Greek fragment no.7 are our sources. Yet they disagree. According to the Latin version Rufus attributes to some doctors the use of cupping glass while he himself would not use it in the beginning of the disease. He would only use it, under some circumstances, if the affected part is liver, and not for the spleen. Greek frg. no.7 recommends a dry cupping glass, sometimes with scarification, for the affection of the liver, while always with scarification for the spleen for the dry cupping glass does not soothe the spleen. In the latin Rufus forbids its use for the spleen while in the Greek he specifies the kind of cupping glass to be used. I do not think that the correspondence between the two sentences entitles us to attribute the Greek fragment to Rufus. Aetius of Amida is possibly incorporating others' opinions.

⁵⁹ in eis autem qui a splene, nihil prodest ventosa: epar enim et venter applicata frenibus, possunt evacuari per ventosam versus continuitatem: splen autem nullum commune habet cum frenibus, sed multum ab eis distat. nequaquam igitur oportet eos qui a splene yctericos curare ventosis. 26 a.

⁶⁰ 23 a.

factors. When there are tumours, Rufus prescribes some suitable cataplasms to be applied to resolve them, make the flanks soft and move the urine which the patients need in this disease.⁶¹ If the tumour abates, Rufus prescribes some cerate composed of certain things to be put on the two flanks.⁶² If there is an inflammation in the flanks Rufus prescribes cataplasms for it.⁶³ If blood supervenes with bile, or if there is bile, distension and pain in either the liver or the spleen, or if there are tumours in the viscera or in the intestines, then bloodletting is useful.⁶⁴ Yet if there is not much blood in the body nor tumour in the viscera, one should

⁶¹ 24-26 = Greek fragment no. 6. There is a difference between the Greek fragment, on the one hand, and the latin and Arabic on the other. The Greek fragment adds embrocations for the phlegmone of the viscera, cerate and various applications. It is also an interest in the timing of introducing each of these measures. First the doctor uses embrocation and cataplasm, then cerate and covers. Yet all the texts agree on the effect of these measures on the urine.

⁶² 27. Latin says mitigatis vero febris.. the Arabic says tumour. Notice that the Greek fragment no.6 prescribes cerate for the phlegmone itself.

⁶³ 28-29. He gives two recipes for its composition.

⁶⁴ 16-17 = Greek frg. no. 3. Latin adds that Praxagoras also used bleeding. It says: alius autem et flebotomans curabit, sicut et Praxagoras, sed non distinguebat quos erat flebotomandum et quos non. (17 a). Yet there is some difference between the three versions Greek, latin and Arabic. The Arabic, as translated above, says bile, extension and pain while the latin says et quando epar vel splen ab inflammatione tenditur et dolet.(16) The Greek, on the other hand, renders it as follows:

και ἐφ' ὧν περὶ τὸ ἥπαρ ἢ τὸν σπλῆνα ἢ ζύνη ἢ διὰ τὰς
ἔνοχλους...

It is possible that the Arabic translator misread the Greek word ἐνοχλῶν and took it for χολῆ which means bile. However I cannot find an explanation for the occurrence of " ab inflammatione" in the latin text as it does not correspond to any Greek counterpart.

not bleed because purgation is more specific to that disease.⁶⁵ Rufus' interest in the individuality of his patient and his capability of purgation may explain his preference for using emetics if there is something that obstructs purging.⁶⁶ Perhaps the same interest in the patient's individuality can explain Rufus' recommendation of various recipes of drugs. He sometimes describes a recipe as strong or adequate or good or useful or more dissolving (in case of cataplasm) while another a weaker one.⁶⁷ In other words he gives the doctor a chance to choose among all these mentioned recipes what is more convenient to the case.

His interest in the individuality of the patient is behind his

⁶⁵ 18. Later in the text Rufus prescribes more medicaments (pharmaca) to be drunk to expel yellow bile. 30-39. Only the latin defines them as purgatives.39. There is a correspondence between what ar-Razi (p. 30) attributes to Rufus of evacuants of yellow bile and these drugs mentioned here. Rufus states that these pharmaca can be also made as pastilles and drunk daily, but he gives no indication of any way of preparation or measurements.

30-32 = G. frg.8; 33-35 = G. frg.9; 37-38 = G. frg.10.
G. frg. nr. 10 differs from the Arabic and latin sentences 37-38 in mentioning some measurement of plants in order to prepare this drink. Arabic fragment nos. 2 and 3 describe two drinks. Rufus mentions the measurements of the ingredients of each recipe, also of the dose of the first recipe and the method of preparation. He names the first one which is taken daily as *لحافظ للخنز* while the second is *شراء لاهليلج ليهو لاهنز*. Unfortunately Rufus does not mention the effect of the first drink while the second is a purgative. It is difficult to say whether any of them is directed at jaundice in particular. Ullmann says that he could not find any mention of the first drink in any Greek or Arabic works. p.83.

⁶⁶ Unfortunately Rufus does not specify here these conditions. See my section on anatomy. 23. The Latin text adds those emetics. It says : per rafanidas frequenter, aliquando autem et post cenam: etenim epar ad ambas evacuationes, eam scilicet que per subductoria, et eam que per vomitus, non improprie ducendum est. 23 a.

⁶⁷ Arabic and Latin 21, 22, 22a, 29, 30, 30a, 31, 32, 34, 36, 37, 38, 72, 75; G. frg. no. 4.

exhortation to the doctor to be aware of the particular nature of the patient's body during treatment because he might not benefit from it. This could be because he has either a (fat) and watery body or a slim and dry body. Therefore he warns the doctor against endangering the level of humidity or the dryness in the body. He says that the doctor should not let humidity be dissipated with diuretics, expectoration and sweating, nor lose dryness through humectating food and bathing in sweet water.⁶⁸

Rufus' therapy also reflects a knowledge of the stages the disease goes into. It seems that certain therapeutic measures are to be used at particular stages. For the beginning of the disease, purgation and bloodletting are prescribed as the best.⁶⁹ He even draws from his experience saying that a lot of people have benefited in the beginning of the disease from purgation.⁷⁰ Within purgation itself, Rufus speaks of the possibility of the non-effectiveness of the first cathartic and the need to give a second one in two days time, and a third in three days time until the colour of the bile becomes blue green rather than yellow.⁷¹ Cupping is not to be introduced immediately.⁷² If the disease lingers, Rufus prescribes a few things. These are sternutatories (if

⁶⁸ 69-70.

⁶⁹ 14= Greek frg. no. 2.

⁷⁰ 19.

⁷¹ Greek frg. no. 4.

⁷² 26 a. non tamen valde laudo neque vituperō eam, sed secundum tempus.

something of the disease remains in the eyes), travelling, rambling, riding, sun bathing, and hot water baths.⁷³

Rufus then turns to diet. He clearly rules that diet by itself can heal.⁷⁴ His diet includes ointment, rubbing, cataplasms, cerate, walking, baths, food, drinks, and coitus. Diet is concerned with evacuating the yellow bile. It is also concerned with the effect of lack of food which would turn the humours into bile. Yet, Rufus does not discuss the effect of a correct diet on producing a healthy humour or rectifying the old morbid one. Rufus' diet corresponds to his therapy not only in their interest in humours but also in the use of cataplasms and bandages which are used for softening and dissolving tumours in the hypochondria.⁷⁵

Rufus draws a picture of the patient's daily life and the

⁷³ 68-77. G. frg. 18 = 71-73, 75. G. frg. 19 = 74. Rufus does not attribute a specific value for each of these measure. Rufus records two alternative recipes of sternutatories. He is cautious about their application as he does not want any drugs to pout into the patient's mouth. He also prescribes its use in the bath because it is quicker in clearing and it blunts the sharpness of the drugs. Notice that Rufus has before recommended drinking honey wine also in the bath.(50).

Rufus attributes to some doctors the belief in the efficacy of sexual intercourse in treating this disease. Yet he himself stresses the value of moderation in diet, coitus and in other things for fear of dangerous consequence on both mind and body. (68 a) With the mention of sternutatories the Arabic text suddenly ends, while the latin version ends with this sentence : et hec est cura ycterorum.77.

⁷⁴ While the Arabic text declares the advantage of diet the Latin declares that not only by drugs but also by diet patients recover. It adds that for some patients diet by itself procured recovery. Latin says : non autem in solis farmacis faciebam curam, sed et dietans quam maxime: aliquibus enim sola dieta prebuit quod querebatur. 40.

⁷⁵ Humours appear in causation as well as in both symptoms and therapy. Rufus is also interested in preserving the level of humidity and dryness of the body. See supra.

things he ought to be doing. Every day when the patient gets up in the morning and evacuates the natural excrements, he has to oil (himself) with pure oil and rub (himself) as well. One should also cook few plants in the oil for they clear the skin and move the sweat. If the patient dries himself up a little, as long as the skin is still humid with oil, (the doctor) puts on the affected side a cloth anointed with a dissolving cerate or a (cataplasma-bandage) such as the one attributed to Amython or the one called Polyarchion.⁷⁶ This (cataplasma-bandage) should have been dissolved first in Cyprian cerate then one uses cerate by itself.⁷⁷ Having covered his hypochondrium with a woollen cloth and wrapped it (hypochondrium) with a (bandage), the patient goes for an appropriate walk.⁷⁸ Having had a certain amount of effort, the patient goes to the bath, rubs and bathes in a much tepid water. Rufus says that bath could be useful for it moves sweating. Rubbing is also useful after washing with natron or with sediments of burnt wine.⁷⁹ Drinking honey wine in the bath is also useful, for it moves the bile and clears it.⁸⁰ Rufus specifies the suitable kinds of foods for jaundice sufferers ⁸¹, from bread, fish ⁸², meat

⁷⁶ The latin text describes it as a cerate, not a cloth anointed with a cerate.

⁷⁷ 45.

⁷⁸ The latin text adds that after walking the patient drinks some drugs then takes a rest.⁴⁶ a.

⁷⁹ 49 = Greek frg. no. 11.

⁸⁰ 41-50.

⁸¹ 51-66.

⁸³, birds ⁸⁴, chicken, soups, (seasoning), salt, vinegar ⁸⁵, beans, vegetables ⁸⁶, fruits ⁸⁷ to wine.⁸⁸ He describes some of these recommended kinds of foods and drinks as laxative, diuretic, easy and quick to digest, and also as strengthening the viscera. The best time for eating is always after exercise and bathing. Rufus warns against repletion and lack of food as he explains that repletion fills in and obstructs the liver, while the lack of food turns the humours into bile.⁸⁹

Rufus, while paying both therapy and diet his main interest, does not say much on prevention. He only speaks of the value of moderation in diet and the dangerous effect of

⁸² Greek frg. no. 12 =51. Arabic frg. no. 1 attributes to Rufus the recommendation of (rock fish) which is also recommended in Greek and Arabic. Yet Rufus prescribes swallowing it alive which is unlikely to be true. Ullmann comments that he has not encountered this method in any Greek or Arabic work. Ibid., p. 83.

⁸³ 56= Greek frg. no. 14.

⁸⁴ 59. Rufus recommends wild birds and warns against marine, domestic and fat birds.

⁸⁵ 56= Greek frg. no. 14; 57.

⁸⁶ 55= Greek frg. no. 13.

⁸⁷ 61= Greek frg. no. 15.

⁸⁸ 64= Greek frg. no. 16.

⁸⁹ 67. 67 a = G. frg. 17. Ullmann denies Rufus' influence on the first sentence of the Arabic fragment of Philagrius where he prescribes bleeding for the obstruction of liver claiming that it is absent in Rufus' text. Ullmann also suggests that Philagrius has drawn it from Galen where one can obviously see this idea in the latter's teaching. Ibid., p. 25 It is clear that Rufus knows something about obstruction of liver as a cause of jaundice. He may not have expressed his views in the same strong language Galen uses. However that does not deny his knowledge of it. The latin text ends the section of diet by this sentence "hec quidem est dieta yctericorum" (68 a) which is missing in the Arabic.

both repletion and lack of food. His therapeutic measures correspond to some of his dietetic measures. They reflect his wide clinical experience. He himself alludes to such experience when he rules that many patients have benefited from purgation at the beginning of the disease; when he says that many patients have recovered by diet alone; and when he ends the section on purgatives by mentioning the possibility of prescribing similar purgatives, but what he has written comes from a considerable experience.⁹⁰ Yet he does not also back up his recommendation with any case histories.

The third disease whose therapy we are going to study is melancholy.

III Melancholy

Krankenjournale and a collection of Arabic and Greek fragments represent Rufus' ideas of how melancholy should be treated. Rufus aims at two goals: first, at procuring a healthy diet which in its turn would produce healthy humours. Second he aims at expelling the morbid humours from the body by whatever means he has at his disposal.⁹¹

He prescribes several recipes, basically from plants, for purging the black bile from the body. He occasionally mentions some measurements of these plants and the way of preparing

⁹⁰ He says: et offerre ipsa oportet sicut ego cum multa experientia scripsi. Latin 39 a.

⁹¹ Greek fragment no. 71 states that in treating melancholy one works on first improving digestion, and then on purging.

these recipes, but generally he does not mention any specific time for taking them nor the number of doses, and only occasionally comments on the effectiveness of these recipes. Let us read first these recipes.

ar-Rāzī, in his book al-Hāwī, gives two recipes taken from Rufus' work On Melancholy. In the first recipe there is no mention of the disease for which this recipe should be used. However the title of the work Melancholy and Rufus' mention of the aim of using this recipe in evacuating the black bile entitle us to assume that it is for melancholy. He says:

(Daisy) purges the black (bile) when two thirds of a drachm of it is drunk with melicrat.⁹²

In the second recipe Rufus explicitly mentions the disease melancholy. He gives some measurement of the ingredients. He says :

A purgative for black(bile) : grind three drachm of lovage, 3 drachm of mint, and drink it with melicrat and some aloe for aloe is good for melancholy.⁹³

According to Iṣḥāq ibn 'Imrān Rufus gives another recipe. He says:

if, in spring, 10 drachm of epithimum, which is a complete potion, is taken in early morning, it purges black bile very much. Yet when it is pounded(epithimum) it should be, dissolved with a quarter of concentrated

⁹² ar-Rāzī, al-Hāwī, VI, p. 86. In order to translate the Arabic names of plants I have used Max Meyerhof's French edition of Maimonides' glossary of drug names and also the English translation of Meyerhof's edition. I have also used Ahmad Issa's dictionary of plant names (see bibliography) and Arabic-Arabic as well as modern Arabic-English dictionaries.

⁹³ Ibid., VI, p. 133.

must (unfermented wine).⁹⁴

This fragment is interesting for the mention of the time of the day as well as the season in which this recipe is recommended. Spring, according to Rufus, is the season that witnesses the agitation of blood and hence the possible occurrence of the disease melancholy.⁹⁵ Therefore Rufus encourages bloodletting in spring in order to get rid of the morbid humour and to avoid the agitation of disease.⁹⁶ Perhaps, at the light of Rufus' statement and the mention of spring in the above-mentioned recipe, this recipe is prescribed for therapeutic purposes as well as for prevention. From Rufus' book To the laymen Ishaq ibn Imran quotes another recipe.⁹⁷ He says:

if an amount of pine resin, the size of walnut, is taken daily and drunk it acts as a laxative. If it is mixed

⁹⁴ Iṣḥāq ibn 'Imrān, Maḡalā fī al-Malinkhuliya, Ms. Munich 805, fol. 112 a. Rufus qualifies four drachms of another purgative known later as Hiera Rufi as a complete potion. See R.-D., fragment 61, p. 324. It is worth noting here that Ishaq dedicates a section at the end of his book On Melancholy for hierae. He declares that has consulted the ancients' recipes and is going to comment upon. Having described hiera of Logadia he says that the weight of epithimum recommended in such a drug is not enough as Rufus had already said that the complete potion of epithimum is 10 or 5 according to another authority . The section on hierae, and a recipe called Itriphel are not included by the editor of the Arabic text in his edition. See Ms. Munich 805, fol. 120 v- 128 v.

⁹⁵ ar-Rāzī, XV, p. 212.

⁹⁶ Ibid. See also my account of humours.

⁹⁷ Iṣḥāq ibn 'Imrān, op. cit., fol. 117 b 9. The mention of Rufus book To the laymen implies that Ishaq consulted more than one book of Rufus in order to write his own book on melancholy.

with some natron it laxates very much.⁹⁸

The disease's name and black bile are absent in this fragment. Moreover ibn Imran's preceding sentences do not entitle us to attribute this recipe to the treatment of melancholy or to the evacuation of black bile. Ibn 'Imrān uses Rufus' words as a medium to talk about suppositories and their efficiency in purgation. However because of the brevity of the fragment it is hard to tell if Rufus himself prescribed it for treating melancholy.

More fragments reflect Rufus' recommendations for purgatives. His recommendation disregards the affected organ from which the disease started, the head or the hypochondrium.⁹⁹ He prescribes them for expelling the black bile as well as for improving digestion because bad digestion is the cause of the formation of this noxious humour.¹⁰⁰ He recommends purging with epithimum and aloe so that patients will not have abundant flatulence, their (natures) will not dry up, their digestion will improve and their urine will flow, which is best for them. Out of his personal experience he recommends drinking daily thirty drachms of the juice of

⁹⁸ Ishāq comments on Rufus' prescription saying that Rufus was obscure as he did not mention the method of taking this recipe : from above as a drink or from below as a suppository. Ishāq thinks that Rufus actually meant both two ways. However Ishāq adds that from his own experience he has found that taking it from below is more effective than from above.

⁹⁹ R.-D., Greek fragment no. 71, p. 359.

¹⁰⁰ ar-Rāzī, I, p. 79; R.-D., fragment no. 70, p. 357,19; Ki. III, 3-4. See also the section on humours in Chapter Three.

wormwood.¹⁰¹ Laxatives (epithimum, mint, hazlewort, whey and wormwood) should be also used daily so that patients will have permanently relaxed bellies.¹⁰²

Yet for some people purgatives are harmful. Therefore Rufus, though he believes in the efficacy of purgatives, recommends vomiting at large intervals by certain kinds of food.¹⁰³ But if the doctor uses radish, origanum and thyme, the patients have to be fasting. More powerful emetics are prohibited not only because they harm the stomach and the oesophagus which are already weakened by the disease, but also because they can bring on melancholy in some people.¹⁰⁴

Rufus uses purgatives for expelling black bile as well as for improving digestion. His concern with providing the patient with good digestion is also clear in his

¹⁰¹ ar-Rāzī, I, p. 78; al-Kashkarī, al-Kunnāsh fī al-tibb, p. 261. While ar-Rāzī does not attribute to Rufus the specification that the juice of wormwood should be drunk after purgation, al-Kashkarī, the tenth century Arabic physician, who also quotes Rufus' book On Melancholy, does. Yet, al-Kashkarī does not specify the quantity that should be given. al-kashkarī quotes Rufus' recommendation of using epithimum, aloe and the drug that is made of pennyroyal without explicitly stating their effect on digestion. Greek fragment no. 71 prescribes aloe and thyme every day in small amounts as they help to loosen (the bowels) moderately and gently.

¹⁰² ar-Rāzī, I, p. 78. Rufus prescribes a way of preparing whey which is not taken out of sheep. Rufus describes it as a safe purgative. Ibid., VI, p. 133.

¹⁰³ Ibid., I, p. 78. See the section on anatomy in Chapter Three.

¹⁰⁴ R.-D., Greek frg. 72, p. 359. Yet in this fragment there is no link between black bile and emetics. On another occasion Rufus recommends warm water to evacuate the urine and the faeces from the outlets of the body after food has descended and has been digested. Though this fragment belongs to Rufus' book On Melancholy it is not clear that its teaching was used for treating melancholy. ar-Rāzī, VI, p. 115.

recommendation for a particular kind of diet.¹⁰⁵ He recommends food that is good, quick to digest, far from producing flatulence, and laxative such as semolina bread, chicken, locust and small fish.¹⁰⁶ Drinking very acid vinegar at bedtime and using seasoning (spices) in the patients' food, especially (squill) sea onion help to improve digestion. White wine should be drunk in moderation. If the patient tolerates it, it is the best for him and he will not need another treatment for wine has everything needed in treating this disease.¹⁰⁷ Baths before lunch are recommended for those who have bad digestion. The patient should have little to do with exercise and the best of it is walking.¹⁰⁸ Improving the patient's diet has an influence on his psychology. Rufus actually encourages the doctor to take care to fructify the patients' bodies for if they put on weight they move from their bad temper and recover completely. Extended travels are also recommended because they change the patients, improve

¹⁰⁵ ar-Rāzī does not title Rufus' diet with the word diet.

¹⁰⁶ Fruits are missing in Rufus' diet for melancholy.

¹⁰⁷ Rufus considers that much drinking leads to many diseases including melancholy. ar-Rāzī, I, p. 75; ar-Raqīq an-Nadīm, p. 227. ar-Rāzī comments on Rufus' opinion saying that excessive drinking leads only to the hypochondriac type, while in melancholy it is useful to have it in diet because patients need an abundant good humid blood. Rufus, in fact, according to Constantine the African, recommends wine in the treatment. Karl Garbers, Ishāq ibn 'Imrān Maqala fī l-Malihuliya, p. 191. I believe that Rufus meant excessive drinking leads to the disease while moderate drinking is capable of helping in treatment. For that opinion see ar-Raqīq an-Nadīm.

¹⁰⁸ In several surviving Greek, Arabic and Latin fragments Rufus recommends coitus for patients with melancholy. See Orib. Coll. Med., VI, 38; R.-D., fragment no. 60; ar-Razi, X, p. 292, 293, 327; al-Burkumānī, al-Maqala al-Muhsinya fī hifz aṣ-Sibha al-Badaniyah, Bodl.I 612 (= Marsh 534), fol. 66 r.

their digestion, take them away from worrying and amuse them.¹⁰⁹

Diet is not the sole capable mean for improving digestion, for there are other means mainly drugs, sweating, warm fomentations, anointing and cataplasms that can effectively produce the same desired result. Rufus prescribes drinking a decoction of mint as it expels wind, clears the blood and releases it from excrements by producing the flow of the urine; and germander and ground pine as they are diuretics and they improve digestion.¹¹⁰ Sweating is also prescribed because it clears the blood and cleans it from excrements.¹¹¹ Frequent warm fomentations on the hypochondrium are prescribed as they improve digestion and remove wind. Washing with decoction of mint and rue dissolves the flatulence and helps promote digestion. If one cooks mint and rue with oil, one can then use the mixture as an ointment for rubbing. If one cooks them with water, one dips a woollen cloth into the mixture and puts the cloth on the belly.¹¹² It is also permitted to make a cataplasm with the seeds that dry up the flatulence (winds), but this should be applied at night. One also anoints the belly with iris oil and takes care to keep it wrapped up and warm.¹¹³ For excessive flatulence one puts also cupping

¹⁰⁹ ar-Rāzī, I, pp. 78-9.

¹¹⁰ al-Kashkarī, al-Kunnāsh fī al-tibb, p.261.

¹¹¹ Ibid.

¹¹² ar-Rāzī, I, p. 79.

¹¹³ It is likely that Rufus' exhortation on covering the belly with covers and clothes in order to help in improving digestion, which is taken from his book On Melancholy,

glass (on the belly), if necessary, and apply strengthening aromatics.¹¹⁴

The time at which the doctor should introduce particular measures is interesting as Rufus recommends bleeding, if possible, at the beginning.¹¹⁵ Emetics should be given at intervals.¹¹⁶ Baths are prescribed before lunch for those who have bad digestion. Drinking very acid vinegar is recommended at bedtime.¹¹⁷ Cataplasms are also prescribed to be introduced at night.¹¹⁸ Rufus prescribes purgatives daily. Yet, he does not mention when one should stop using them. He recommends withholding treatment for a while because patients may recover at that time. Besides it will give nature a chance to overcome the disease already attenuated by treatment.¹¹⁹ Moreover excessive treatment weakens nature.¹²⁰ A cataplasm made of nard is to be put on the belly when the treatment stops. Its benefit is primarily to take off the pain, especially at the end of an illness.¹²¹

There is also some understanding of the individuality of the patients. For instance Rufus recommends vomiting instead

concerns patients with melancholy. ar-Rāzī, V, p. 120.

¹¹⁴ ar-Rāzī, I, p. 79.

¹¹⁵ ar-Rāzī, I, p. 78.

¹¹⁶ R.-D., Greek frg. 72, p. 359.

¹¹⁷ ar-Rāzī, I, p. 78.

¹¹⁸ Ibid., p. 79.

¹¹⁹ R.-D., fragment no. 72. p. 360.

¹²⁰ ar-Rāzī, I, p. 79.

¹²¹ Ibid.

of purgation for those who have weak stomachs. Having applied bloodletting, if a patient's strength collapses, the doctor should then purge with colocynth and black hellebore. Baths are for those who have bad digestion which is a common complaint among patients with this disease. Wine is all what they need for those patients who can tolerate it.¹²²

Yet the understanding of the differences between the patients does not cover differences based on gender or age. He claims that men are more liable to develop melancholy than women. However if it attacks women their hallucination and distress are greater. It does not occur in children and it rarely occurs in young people, while it is specific to old people.¹²³ Rufus does not lay down a certain therapy for women, and another for men. Nor does he give a specific therapy for old people and another for young people though it rarely attacks them.

So far have we been dealing with Rufus' theoretical statements. It is important for our study to look at the three cases of melancholy in Ki, which Rufus actually treats, to investigate how far practice is different from theory. Yet It is also interesting to give first an account of Rufus' criticism of those doctors who treated patients from melancholy in two cases of Ki. Rufus' criticism illustrates his idea of the correct treatment. Case no. III was treated by an inexperienced doctor who vomited and purged the patient

¹²² Ibid., I, p. 78.

¹²³ Ibid., I, p. 74-5.

several times with sharp medicines and ignored rectifying his temperament. Rufus explains that the best treatment is to rectify the temperament because ill temperament is responsible for producing this (morbid) humour and its production does not stop until the temperament is rectified. The consequence of this wrong treatment is that, when the patient's temperament became sharp, under the influence of sharp medicines, excessive burning increased in the patient's body. The patient went mad, and stopped eating and drinking until he died. Unfortunately Rufus does not mention what should be given to rectify the temperament.

Case no IV gives a brief insight into how a temperament can be rectified. This case was treated by two doctors. One of them applied successively purgations with sharp medicines and black hellebore, while the other treated with humectation, food and amusement. Rufus states that the patient's recovery was due to both of them. One had expelled the matter while the other rectified the temperament. Rufus does not dwell long on how to rectify a temperament. He simply says that humectation, food and entertainment rectify a temperament. Having read Rufus' criticism, one can maintain that Rufus believes that the right therapy for melancholy is to expel the noxious humour and to have a correct temperament so that the noxious humour will not be created again.

There are general remarks about the first two cases Rufus treats. Melancholy is not the sole disease he concentrates his efforts to overcome. In fact signs of melancholy only appeared during Rufus' treatment for the original diseases. In case no.

I, signs of melancholy appeared during Rufus' treatment of the patient from some ailment he had in his spleen which occurred after the patient stopped using the purgatives he had been taking for constipation. In case no. II the patient also stopped taking the purgatives and bloodletting he used to take annually for some ailments in his ribs. He started feeling pain in his chest and in one side of his face. Rufus was giving some treatment for this patient when signs of melancholy appeared. The fact that Rufus is dealing with more than one disease makes it difficult to distinguish between what therapeutic means Rufus uses for treating melancholy from those for the original disorder. However, a careful reading of these two texts can help us to differentiate between the two categories.

The three cases which Rufus himself treats conform with what we have already said about Rufus' treatment for melancholy. Rufus' therapy is based on two ideas to get rid of the noxious humour and to rectify the temperament. There is no hierarchy of which should come first as might be suggested from Greek frg. no. 71: good digestion comes first and then purging. However it is not necessary in every case to clean the body with purgatives, as in case no. V, because the noxious humour that was being secreted was already mature. Also in case no. II Rufus had already got rid of the noxious humour before the signs of melancholy appeared, as he explained to his fellow doctors, so that what he needed in treating melancholy was to give a humid diet and to keep the patient entertained. Entertainment shows Rufus' interest in

the patient's psyche which influences the temperament. Rufus' interest in the patient's psyche is also clear in his comment on the value of travels to the patient and also when he urges the doctor not to inform his patient that his disease is melancholy. He also asks the doctor to help his patient in his affairs, to amuse him, to entertain him and to divert him from worrying.¹²⁴ Rufus, according to Ishaq ibn Imran, once made a leaden hat for a patient who imagined himself without a head.¹²⁵ Rufus' practice adds another dimension to our understanding to his interest in the patient's psyche. He gives also a short message for the relevance of aetiology to therapy when he says that treatment is the opposite to the cause or in other words "contraria contrariis curantur".

General Conclusion

I have discussed in this chapter Rufus' therapy of three different diseases : stones in the kidneys and bladder, melancholy and jaundice. All of them are linked with specific organs of the body : the kidneys and the bladder in the first one, the hypochondrium in the second and the liver or the spleen in the third. However other organs of the body are also affected as a result of the illness of these organs. Having read Rufus' accounts of these three diseases the reader is struck by the similarities in Rufus' presentation of his materials. Rufus is interested in defining almost each disease

¹²⁴ I, p. 79.

¹²⁵ Ishaq ibn 'Imrān, op. cit., fol. 98 b 12.

in terms of curability and longevity.¹²⁶ He discusses causes, symptoms, and, obviously, treatment and prevention. Yet treatment wins the largest part of these three accounts. His own clinical experience is evident in some of his therapeutic recommendation as in the case of lithotomy.¹²⁷ However the number of case-histories which might emphasize such a clinical experience is very limited. In fact there are no case histories in jaundice while there are in lithiasis and melancholy.

The reader can notice the characteristics of Rufus' therapy in three diseases. Rufus encourages the doctor to hasten to tackle treatment, because of the dangerous consequences that might otherwise occur. His choice of both the therapeutic as well as the preventative methods is based on his knowledge not only of the cause of the disease but also of the patient's particular case. Such a knowledge is theoretical as well as practical. Rufus observes the different symptoms which indicate the kind of the disease, the affected organ, and the end of the disease or unfortunately its longevity.¹²⁸ Yet he

¹²⁶ He defines stones of the kidneys as deadly (Sideras, Über die Nieren und Blasenleiden, p. 114/2), as well as being able to grow old with the patient (*ibid.*, p. 126/33). According to al-Kashkarī (al-Kunnāsh fī al-tibb, p. 260), Rufus comments on the ancients' calling melancholy Hypochondrium? saying that they should have named it by one of the faculties of the soul. He defines jaundice as neither dangerous nor acute. It is safe, albeit chronic, if it is treated quickly and regularly. If it is treated as it should be, it is more quick to heal than all the chronic diseases. He also differentiates between two kinds of jaundice according to the affected organ, spleen or liver. The liver type is more difficult to cure. Ullmann, Über die Gelbsucht, p. 32 (1-4).

¹²⁷ See the section on stones in kidneys and bladder.

¹²⁸ See Chapter Four.

interprets these signs in theoretical terms: humoral and qualitative. Then he bases the therapy on these two factors the observed signs and its theoretical explanation. During his treatment he waits for the signs to reveal in the patient's condition either the success or the failure of treatment. Yet he employs his theoretical knowledge in his judgement on the case. He occasionally leans solely on theory during his treatment, as in the second case of Kj, where signs have caused the other doctors to lose hope of the patient's recovery. Yet Rufus was sure that he had got rid of the noxious matter despite the alarming signs. The patient later recovered, proving Rufus' true insight. Rufus' therapy is not a rigid but a flexible system which responds to the developments of the patient's case. The doctor is required to keep an eye on his patient during treatment to observe any changes in his case. Upon these changes treatment can be rectified or altered.¹²⁹ Rufus' therapy is based on both theory and observation.¹³⁰

In terms of causation we have already noticed that humours are present in causation, symptoms and therapy in both melancholy and jaundice, while there are absolutely absent in stones in the kidneys and bladder. Qualities: hot and cold are present in stones in the bladder and jaundice while absent in melancholy. Yet the therapeutic means Rufus uses in treating melancholy and jaundice are similar to those used for stones

¹²⁹ Ullmann, über die Gelbsucht, p. 40 (69-70).

¹³⁰ Henrike Thomassen says that Rufus' therapy is causal and its purpose is not to harm the patient. H. Thomassen, Die Medizin des Rufus von Ephesos, p. 115.

in the kidneys and bladder. In all the three diseases Rufus uses diuretics, drinking the juice of wormwood, fomentations and cataplasms. Yet, though in all the three he is concerned with evacuation, Rufus aims at evacuating different things. In melancholy and jaundice he evacuates the noxious humour, while in stones in the kidneys and bladder he applies whatever evacuates or crushes the stones. In lithiasis he operates to remove stones, while there is no need for such a measure in both melancholy and jaundice and so it is missing.

Similarities between therapy for melancholy and that for jaundice are striking. Rufus starts off treating with purgation and if possible bloodletting. Emetics should be used instead of purgatives if something prevents the use of the latter. Cupping glass and the external applicants such as cataplasms that should be put on the flanks are common in both melancholy and jaundice. Diet for melancholy corresponds with that of jaundice. Rufus believes that diet can by itself heal in both of them. In both there are fish, chicken, vinegar, wine, while fruits are missing in melancholy. In both Rufus recommends eating after bathing and it is also prescribed for melancholics when they have indigestion. In melancholy Rufus recommends travelling for psychic reasons. In jaundice, though the recommendation is for only when the disease lingers, there is a possibility that it is also for the same psychic reason. Perhaps one can explain this correspondence by the fact that humours explain the occurrence of the two diseases. In both of them the hypochondrium is the most affected organ. Yet the correspondence between diet for melancholics and for

jaundice sufferers, on the one hand, and that of stones in the kidneys, on the other, suggests that it is better to believe that the ancient doctor has at his disposal a limited number of means and he uses almost all of them.¹³¹ The differences occur when there is a need for operation, and when the patient's individual nature cannot tolerate the prescribed therapeutic measure.

Throughout this chapter Rufus' therapy appeared to be consisted of pharmacology and surgery while diet occupies a particular status which I am going to discuss later. Surgery means to operate as well as to use external applicants such bleeding, cupping glass and cataplasms. This chapter has demonstrated Rufus' use of these external applicants as well as his ambivalent attitude towards operation. If one turns to pharmacology which means the use of drugs such as purgatives or diuretics or emetics, Rufus' wide knowledge of plants is evident.¹³² Rufus qualifies some of these drugs and gives alternatives for some of the recipes. Purgatives and diuretics are prescribed for the beginning of the disease, while emetics when there is a repletion. He mentions the morning as the convenient time for some drug to be taken. While there is no

¹³¹ Vivian Nutton's comments on the celebrity of diet among the Hippocratics as well as Rufus saying : "It (diet) was as appropriate for treating gout as for melancholy, for removing tumours as for improving one's memory. It was infinitely flexible in its application, for it could be varied to suit each and every patient; and, provided that the initial diagnosis or prognosis was correct, it did not require alteration during the course of treatment, for it was aimed at attacking underlying causes, not symptoms." See V. Nutton, "Therapeutic Methods and Methodist Therapeutics in the Roman Empire", p. 15.

¹³² Cataplasms also show Rufus' knowledge of plants.

indication of Rufus' concern with mentioning the measurement of the ingredients of his drugs or their method preparation in stones in the kidneys and bladder, there is a very little interest of measurement in some of the recipes of melancholy and jaundice.¹³³ In jaundice, infusing, cooking or grinding with or without auxiliaries such as water, wine and honey wine are methods of preparing drugs, while there is no indication of such an interest in lithiasis.¹³⁴ In general Rufus is not consistently concerned with specifying the measurement of the ingredients of the drugs he prescribes or the measurement of the doses or the method of preparation or the specific timing of the day for their introduction. He lists some materia medica to be used and leaves the rest to the discretion of the doctor.¹³⁵

Diet has a particular place in Rufus' writings. In chapter Three I have discussed its potential harmful as well as its preventative influence. Throughout this chapter diet has appeared as both curative as well as a preventative measure. In both melancholy and jaundice Rufus announces that diet by itself can heal. In bladder stones Rufus rules that the knowledge of the reason of stone formation is not only

¹³³ Greek fragment no. 10 and Arabic frgs. 2 and 3. in Ullmann's Über die Gelbsucht.

¹³⁴ We have one occasion when Rufus mentions taking the decoctions of a few plants as preparing aids to diuresis. Sideras, Über Die Nieren und Blasenleiden, p. 120, 17.

¹³⁵ For more close explanations of the absence of dosages in Rufus' therapy see Vivian Nutton, "Therapeutic Methods and Methodist Therapeutics in the Roman Empire" in History of Therapy, pp. 17-18.

important for subsequent diet but also for prevention.¹³⁶ In melancholy (Ki) if the cause of the disease is a wrong diet the therapy Rufus prescribes the opposite. Rufus, in general, warns against repletion and lack of food as he rules that moderation is considered the ultimate.¹³⁷ He generally mentions the suitable kinds of foods and drinks to be offered to the patients without specifying the number of daily meals. Yet he maintains that food should be given after exercise and baths. The doctor has to work to restore the patient's body to its natural balance of moderation. Yet it strikes the reader that Rufus, though he believes that diet by itself can heal, introduces diet as both curative and preventative a measure only after having discussed therapy. It is possible then to argue that Rufus means by such timing to represent diet as a way of life that it should be followed in convalescence in order to prevent the recurrence of the disease as well as to achieve a complete recovery. Diet is both an alternative and also a complementary measure to therapy.

Rufus has shown an interest in the age and gender at which these diseases mostly occur. Rufus claims that stones in the kidneys and bladder attack men more than women.¹³⁸ Melancholy occurs in men more than in women. Yet when it occurs in women their distress and hallucination is

¹³⁶ Ibid., p. 152, 13.

¹³⁷ Ibid., p. 122, 26.

¹³⁸ See the section on water in Chapter Two.

greater.¹³⁹ He has also stated that stones in bladder occur in children more than in adults, while it is the opposite in melancholy.¹⁴⁰ Unfortunately there is no indication of any concern with age or gender in relation with jaundice. Yet it is striking that there is no concern with giving a particular diet or therapy according to age or gender in those three diseases except in the operation for the stone where the age of the patient is one of the factors that decides the way of operating.

Now that we have discussed the characteristics of Rufus' therapy, his affinity with Hippocrates becomes clear. Rufus' therapy aims at evacuating morbid humours. Diet plays an important role in cure and prevention. He uses many of the drugs which appear in the Hippocratic Corpus such as diuretics and purgatives. Yet, his attitude towards operating marks him off from Hippocrates as he announces that one should not seek the extreme measures voluntarily. Yet the overlap between his practice and that of Soranus' the Methodist, to which Vivian Nutton has drawn the attention, suggests, in addition to the limitedness of the available therapeutic measures, also Rufus' eclectic tendencies. As Vivian Nutton has pointed to some of the characteristics of the Methodists' practice, one can easily recognize some of them in Rufus.¹⁴¹ Rufus' eagerness to tackle the disease in its beginning, the presence of some

¹³⁹ It does not occur in children and it rarely occurs in young people while it is specific to old people. ar-Razi, I, pp. 74-5.

¹⁴⁰ See the section on water.

¹⁴¹ See Vivian Nutton, op. cit., pp. 21-28.

signs of belief in temporal stages of illness, his belief in rectifying the therapy according to the arising signs, the absence of a strong link between therapy and critical days, the interest in the patient's preference for foods as one of the aspects of his interest in the patient's psychology testify to such tendencies. If one combines the two opinions Rufus then appears Hippocratic with some eclectic tendencies.¹⁴²

In the last part of this chapter I shall be looking at a recipe which won Rufus the appreciation of both late antiquity and the Middle Ages.

Hiera Rufi

In the Latin version of Rufus' work On Joint Diseases $\eta. \tau\acute{\omega}\nu \kappa\alpha\tau\grave{\alpha} \acute{\alpha}\rho\theta\rho\alpha \nu\omicron\sigma\gamma\mu\acute{\alpha}\tau\omega\nu$ known as De Podagra there is a section on purgatives which ought to be used in therapy.¹⁴³ Rufus introduces one of the purgatives as the greatest help he

¹⁴² Henrike Thomassen has tried to prove the pneumatist and methodist influence on Rufus by highlighting the appearance of some of the therapeutic methods such as the use of baths or simple clysters and the interest in the patient's previous preference of kinds of foods as belonging to these two schools. See Henrike Thomassen, Die Medizin des Rufus von Ephesos, pp. 85, 89, 92, 93, 96, 97. Interpreting Rufus' use of a particular kind of bath as a sign of his belief in the strictus and laxus states is not convincing as Rufus does not represent anywhere in his writings a sign of such belief. Rufus' aetiology is generally humoral and qualitative. As for the use of simple clysters Hippocrates used it as well. Yet, I agree with her on taking Rufus' interest in his patients' psychology and their preference for foods as signs of some Methodist influence.

¹⁴³ R.-D., pp. 265-268.

knows for arthritis.¹⁴⁴ This medicament consists of 20 drachms of the interior of colocynth, 10 dr. of agaricon (fungus), 10 dr. of germander, 8 dr. of opopanax, 8 dr. of opocyrenaicon, 8 dr. of sagapenum, 5 dr. of parsley, 5 dr. of round aristolochia, 5 dr. of white pepper, 4 dr. of cinnamon, 4 dr. of spikenard, 4 dr. of myrrh, and 4 dr. of saffron. One mixes all the ingredients together with sufficient honey and gives it frequently and gradually, because purgatives ought not be given at once and suddenly. The maximum dose of the drug is 4 dr. which ought to be given in either honey-wine or water and with one spoonful of salt, thereupon it cleans better, (quicker) and easier.¹⁴⁵

Rufus does not name this drug, though his words reflect a personal knowledge of it (Rufus uses the word " I know " - here it is the Latin scio - to indicate his personal acquaintance as in the case histories he includes in his works). Even in the Arabic version of Rufus' book On Joint Diseases which appears in fragments in ar-Rāzī's book al-Hāwī there is no name given for such a drug.¹⁴⁶

¹⁴⁴ Ibid., p. 267, 6." Maximum autem ego scio et manifestum adiutorium ad arthriticos esse..."

¹⁴⁵ " et melius, et cito et facilius purgat". Ibid, p. 268, 9.

¹⁴⁶ ar-Rāzī, XI, p. 218. The Arabic version lacks the sentence " I know". It begins thus : " This is a suitable (convenient) medicament for them ... ". There are some differences between the Arabic and the Latin versions: the Arabic has 10 dr. of colocynth while the Latin has 20; opocyrenaicon is missing in the Arabic; aristolochia appears without the adjective round; honey, which is to be added to the ingredients, is described in the Arabic version as honey which has been boiled and its foam has been removed; and there is no mention of water or salt in the Arabic. The Arabic adds that if one mixes this medicament with aloe it makes it more

Oribasius, Aetius of Amida and Paul of Aegina all mention this recipe in their works. These are fragments nos. 22, 46, 55, 61 and 119 in Ruelle-Darembert's edition. The differences between those recipes and that of De Podagra are minor, which enhances the belief in their authenticity.

Oribasius is the first writer to name this medicament hiera. In his work Synagogai Oribasius quotes a large section of Rufus' book On Joint Diseases (neither Latin nor Arabic complete versions of this section have survived)¹⁴⁷ where he entitles this recipe " hiera of syconia taken from Rufus book on Joint diseases". In other words Oribasius has given this recipe the name hiera without attributing its authorship to Rufus. Frg. 46, however, which is taken from Oribasius' Synopsis, shifts the name of the drug from hiera of colocynth, as it is known in frg. 22, to hiera Rufi, while frg. 55 which is taken from Oribasius' Euporista names it simply hiera without discussing its authorship. Moreover Aetius names it hiera Rufi (frg. 61)¹⁴⁸ and so does Paul of Aegina (frg.

effective and more cleaning. I believe that all these differences are minor. See below for a discussion of the source of the Latin and Arabic versions of Rufus' work.

¹⁴⁷ Regardless of the minor differences between the Latin and the Arabic versions the correspondence is striking, which suggests a common source. However the survival of a lengthy section of Rufus' book On Joint Diseases in Oribasius' book, though missing in both Latin and Arabic versions, may suggest a different source used exclusively by Oribasius. That source might be an earlier version of Rufus' work, or more likely Rufus' original work, earlier than the version used in both Latin and Arabic versions.

¹⁴⁸ This fragment gives two versions, taken from two different manuscripts, of hiera Rufi. These manuscripts are Cod. Paris 1883 and cod. Bodleian 708. They differ among each other in naming hiera as " hiera Rufi against melancholy" as in cod.Paris, while cod. Bodleian names it as " hiera taken

119). A question raises itself : why is there a shift in the authorship especially if one bears in mind that Rufus does not claim the invention of this drug ? In De Podagra Rufus only claims some personal acquaintance with its effect in treating arthritis patients: an acquaintance that is due to a successful application of the drug rather than an authorship. In frg. 61, which is, as Aetius the excerptor claims ¹⁴⁹, taken from Rufus' book On Melancholy for treating melancholy, Rufus does not claim the authorship of the recipe though he declares his familiarity with giving it in a variety of diseases. As a matter of fact, as Ilberg himself has correctly pointed out ¹⁵⁰, Rufus himself reveals in the introduction of frg. 22 an ancient use of the drug in treating pleurisy while the modern use encourages using it in a variety of diseases. Besides the verb " I know" which could be interpreted as a

from Rufus' book on melancholy". The French translation does not distinguish between the two. It renders both as " hiera Rufi from his book on melancholy".

¹⁴⁹ A comparison between the two versions of frg. 61, on the one hand, and that of De Podagra, on the other hand, shows that the version of cod. Paris, though it adds ingredients which are not mentioned in the recipe of De Podagra's recipe, is closer to it than the version of cod. Bodl. The version of cod. Paris does not lack most of the ingredients which are mentioned in the recipe of De Podagra while the version of cod. Bodl. does. In general the two versions of frg. 61 are not too far from that of De Podagra.

¹⁵⁰ Johannes Ilberg, Rufus von Ephesos, p. 20, f.n. 3. Ilberg also says that the name hiera has no connection with the Egyptian temple medicine but it indicates the strong and many-sided effectiveness of the drug. I think Ilberg had in mind when he dismissed the relation between hiera and temple medicine Galen's passage where Galen links hiera with the temple of Hephaistus at Memphis. Ullmann, moreover, attributes to Scribonius Largus the saying that the name declares the respected character of the drug. Manfred Ullmann, Die Medizin im Islam, p. 296.

personal knowledge of something is missing in that frg. no. 22

The reason for such a shift of authorship could be explained by the nature of those works. Oribasius composed Synagogai in seventy books so he had the opportunity to quote extensively from his sources and to use long titles such as "Hiera of syconia taken from Rufus' book On Joints Diseases". As for both Synopsis and Euporista Oribasius was excerpting his afore-mentioned work so some of the materials had been excluded or abbreviated and hiera colocynthi became hiera Rufi. Rufus' familiarity with the application of hiera might have been the reason behind Aetius attributing the drug to Rufus. As for Paul, there are similarities between his hiera Rufi and that mentioned in Oribasius' Synopsis which suggest that Oribasius' Synopsis was Paul's source. Moreover Oribasius' Synopsis indicates Rufus' authorship of the recipe.¹⁵¹

It is difficult to explain Rufus' reluctance to name this drug even hiera, a name he himself is not ignorant of, as evident from the surviving fragments.¹⁵² Rufus mentions in the same treatise On Joint Diseases that hiera helps well when it is given monthly.¹⁵³ Perhaps Rufus named it hiera but the

¹⁵¹ Frg. 119 follows frg. 46 but differs from it in measuring ten drachmas of cassia instead of only four in frg. 46. If one compares it with the recipe of De Podagra one notices that it lacks agaricon and opopanax while it adds nothing new.

¹⁵² Frg. 22 shows Rufus' knowledge of the word hiera and of some old hiera recipes such as hiera Iosti.

¹⁵³ R.-D., p. 277, 9.

manuscripts which have reached us did not preserve that name, while Oribasius was fortunate to look at such manuscripts which gave him the opportunity to learn about the history of hiera of colocynth or as it was later to be known among the Arabs Iyarj Rufus.

Iyarj Rufus¹⁵⁴

Hiera Rufi was a very celebrated drug among the Arabs. The names of all those famous Arabic authorities (Sabūr ibn Sahl, Thabit ibn Qurra, ar-Rāzī, al-Qumrī, Ibn al-Jazzār, Ibn Sīnā, Ibn Jumai^c, Ibn abi al-Bayān al-Isra'illī, ash-Shirāzī, Muḥammad ibn Bahā' ad-Dīn ash-Shirāzī, and Dawūd al-Anṭāki)¹⁵⁵ who either mentioned it or described it reflect a

¹⁵⁴ Hiera was known to the Arabs as Iyarj which is a Persian word. Ullmann, Die Medizin im Islam, p. 296.

¹⁵⁵ Ullmann gives a number of Arabic writings where hiera Rufi is quoted. That number is by no means final as I have managed to discover other writings where hiera Rufi is mentioned. This perhaps gives an idea about the popularity of the drug and the Arabs' general interest in therapy and pharmacopoeia.

Sabūr ibn Sahl, K. al-Agrabādhin al-Kabīr, Ms. Munich 808, 2; Abu al-Ḥasan Thabit ibn Qurra, K. ad-Dāhira fi 'ilm at-tibb, ed. by Dr. G. Sobhy. Cairo, 1928; M. Meyerhof, " The book of treasures", an early Arabic treatise on medicine. In Isis vol. XIV, 1930, pp. 55-76; Ar-Rāzī, al-Hāwī, Haydarabad, 1955 ff.; Abu Maṣūūr al-Qumrī, Kunāsh Al-Ghinā wa al-Munā: Br. lib. Or. 6623, 5567, 5721; Ibn al-Jazzār, Zād al-Musafir wa Qūt al-Hadīr Bodl. I 559 = Hunt 302, Dresden E a 209, 1 ; Ibn Sīnā, Al-Qanūn fī l-tibb, Rome 1593, Cairo 1877. Rep. Baghdad 1970; Abu l-Makarim Hibat Allah ibn Jumai^c al-Isra'illī, Kitāb al-Irshad li-masalih al-anfus wa-l-ajsād. Mss. Brit. lib. 1360 (Add. 25087); Abu l-Fad l Dawūd ibn abi l-Bayān al-Isra'illī, K. Dustūr al-bimaristani. Le formulaire des hopitaux d' Ibn l. Bayan, médecin du bimaristan annacery au Caire au XIIIe siècle, ouvrage annoté et publié pour la première fois par Paul Sbath, Bull. de l' Inst. d' Égypte, 15, 1932-33, pp. 9-78; Najm ad-Dīn Maḥmūd ibn Ilyās ash-Shirāzī, K. al-Hāwī fī 'ilm at-tadāwī. ed. Pierre Guigues, Le livre de l'art du

realization of the efficacy of the drug as well as an acknowledgement of Rufus' importance.

It seems that the Arabs did not doubt Rufus' authorship of the recipe hiera as we have no evidence of any discussion of its authenticity. I find it interesting here to discuss the source or sources the Arabs used to learn of hiera Rufi. Whether these sources are admitted by the Arabs themselves or can be detected from a comparison between the recipes is worth discussing here. I shall be also looking at what diseases the Arabs thought hiera Rufi was effective against in comparison with those diseases the Greek authorities mentioned. The aim is to search for an indication of either originality or conventionality in the Arabic response to hiera Rufi in particular.

The first ever mention of hiera Rufi in Arabic medical literature is in Sabūr ibn Sahl's (d. 869) book al-Aqrabādhīn al-Kabīr.¹⁵⁶ This book is on pharmacy and it contains five recipes of hiera including Rufus'. Sabur does not mention the source which he uses for citing hiera Rufi. However we know that Sabur was a Syriac speaker who wrote in Arabic.¹⁵⁷ That would confine our research to a Syriac source. Whether this source is a Syriac translation of a Greek work or an original

traitement de Najm ad-dyn Mahmoud, Beyrouth 1903; Mss. Br. lib. Or. 9203, Cambridge Or. 1496(8); Muḥammad ibn Bahā' al-Dīn ash-Shirāzī, Fawā'id al-husainyah fī al-mujarrabāt al-Tibbyah, Army medical library (i.e. National library of Medicine) 10; Dawūd al-Anṭākī, K. Tadhkirat ul- al-Albāb, Cairo, 1866. 2 vols. /a

¹⁵⁶ Ms. Munich, 808, 2, fol. 14 r. 2 f.

¹⁵⁷ For a discussion of the transmission from Greek into Arabic see the following chapter.

Syriac work in which hiera Rufi is quoted is a question which could be answered by a comparison between Sabur's recipe and all the above-mentioned Latin and Greek versions of the recipe. First: hiera Rufi according to Sabur consists of 20 drachm of (Shahm) of colocynth, 5 dr. of socotrina aloe ¹⁵⁸, 10 dr. of Galingale, 20 dr. of germander , 5 dr. of sagapenum, 5 dr. of opopanax, 5 dr. of Parsley ¹⁵⁹, 5 dr. of round aristolochia, 5 dr. of white pepper, 2 dr. spikenard, 2 dr. of cassia tree, 2 dr. of cinnamon, 2 dr. of saffron, 2 dr. of ginger, 2 dr. of hulwort, and 2 dr. of myrrh.

One notices that aloe, galingale and ginger do not appear in any Greek recipe, while cassia appears in frg. 46 (Oribasius), frg.61 (Aetius) and frg. 119 (Paul). Hulwort, on the other hand, appears in all the Greek fragments but not in the Latin work De Podagra. Nevertheless there are some ingredients which appear in Greek and Latin fragments but are missing here. If one looks at measurements one notices that the measurement of 2 dr. appears in neither Greek nor Latin fragment; neither does 20 dr. for germander. The correspondence between Sabūr's recipe and the afore-mentioned Greek fragments suggests that the source for Sabur ibn Sahl's recipe was either Oribasius' Synopsis or Aetius of Amida's work. Yet the differences suggest that there was a re-working of Rufus' recipe either by Sabur himself or more likely by an

¹⁵⁸ The name aloe socotrina is derived from the name of the Island of Socotra. Max Meyerhof, Moses Maimonides' Glossary of Drug Names, p. 217.

¹⁵⁹ Sabūr uses Arabic transliteration of the Greek names of germander and parsley.

earlier Syriac authority. This authority had added more ingredients to the Greek recipe.

Besides Sabūr ibn Sahl, ps. Thabit ibn Qurra ¹⁶⁰, al-Qumrī (fl. 960-980) ¹⁶¹, Ibn Sīnā (b. 980 - d. 1037) ¹⁶², Ibn Jumā' al-Isrā'īlī (d.1198) ¹⁶³, Ibn abi al-Bayān (b. 1161 - d. 1240) ¹⁶⁴; Najm ad-Dīn ibn Ilyās ash-Shirāzī (d. 1330) ¹⁶⁵ and Muḥammad ibn Bahā' ad-Dīn ash-Shirāzī (d. 1467) ¹⁶⁶ all described hiera Rufi. These writings are, with the exception of ibn abi al-Bayān's work, which is on materia medica, medical encyclopedia which cover various aspects of

¹⁶⁰ K. adh-Dhakhira fī 'ilm at-tibb, ed. by Dr. G. Sobhy, Cairo, 1928, p. 11. Ullmann doubts Thabit's authorship of this book. He also suggests the first half of the tenth century as a possible date for the book's composition. Ullmann, Die Medizin im Islam, p. 136.

ps. Thabit introduces hiera Rufi with hiera of colocynth. This is an interesting statement. It might suggest that a translation of Oribasius' Synagogai (frg. 22) where Oribasius introduces hiera of colocynth as " taken from Rufus book On Arthritis" is ps. Thabit's source. However it is difficult to know if ps. Thabit's statement implies a realization of the possibility that hiera of colocynth is not Rufus' invention as ps. Thabit does not dwell on that subject.

¹⁶¹ K. al-Ghinā wa al-Munā: Mss. Br. lib. Or. 6623, 5567, 5721. Only does Ms. 5721 give two recipes. fol. 20 v -6 f.

¹⁶² K. al-Qanūn fi l-Tibb, Baghdad, 1970, vol. III, pp. 342-3.

¹⁶³ Kitāb al-Irshad li-masalih al-anfus wa-l-ajsād. Ms. Brit. lib. 1360(Add. 25087), fol. 152 b 16.

¹⁶⁴ K. ad-Dustūr al-Bimaristānī, Le formulaire des hopitaux d' Ibn l. Bayan, médecin du bimaristan annacery au Caire au XIIIe siècle, ouvrage annoté et publié pour la première fois par Paul Sbath, Bull. de l'Inst. d'Égypte, 15, 1932-33, p.33.

¹⁶⁵ K. al-Hāwī fī 'ilm at-tadāwī, p. 104, 4; Ms. Br. lib. Or. 9203, fol. 314 v 4 f.

¹⁶⁶ K. Fawā' id al-husainyah fi al-mujarrabāt al-tibbyah, Army Medical library 10, fol. 251 r -3 f.

medicine. al-Qumrī and Ibn Sīnā are the only writers who give two versions of hiera Rufi. The survival of more than one Arabic version of hiera Rufi in the writings of those two writers (we are not discussing now the possibility of their being dependant on each other) indicates an abundance of Arabic sources where one can learn about hiera Rufi. This abundance of sources proves a wide Arabic interest in both pharmacopoeia and therapy. Quoting hiera Rufi in such sources implies recognition of its importance.

If one looks at those recipes one notices that there is a correspondence between ps. Thabit's recipe, al-Qumrī's recipe A ¹⁶⁷, Ibn Sīnā's recipe B and Najm ad-Dīn ibn Maḥmūd ash-Shirāzī's (al-Hāwī) in ingredients as well as in measurements.¹⁶⁸ This could mean that Thabit's recipe, as the earliest of them all, served as a source for those writers. While al-Qumrī himself, on one occasion ¹⁶⁹, admits that Thabit is his source, the rest are silent about their sources. However it is difficult to judge whether Ibn Sīnā used Thabit's or al-Qumrī's. As for ash-Shirāzī, he might have used any of those just mentioned.

If we believe that ps. Thabit's recipe was the source for

¹⁶⁷ I have named al-Qumrī's as well as Ibn Sīnā's recipes A and B. The only difference between ps. Thabit's and al-Qumrī's is the absence of myrrh in al-Qumrī.

¹⁶⁸ Ibn Sīnā's B differs from ps. Thabit's in adding the word socotrina to describe aloe; it also mentions black and white pepper. ash-Shirāzī's differs from ps. Thabit's in two things : first the absence of nard, second in describing aloe with scotorina. It gives 2 drachms as a measurement of white pepper.

¹⁶⁹ Ms. Br. lib. 5721, fol. 199 v -1 f.

all those Arabic authors, who was ps. Thabit's source ? It is possible that Sabūr ibn Sahl was ps. Thabit's source. The two recipes almost completely agree with each other. However they disagree in the following: Sabūr's qualifies aloe as socotrīna while ps. Thabit's does not. Second Sabūr's measures five drachms each of sagapenum and opopanax while ps. Thabit's gives the measure as 8 drachms.

Ibn Jumai' 's recipe and that of ps. Thabit's agree on many ingredients and measurements. However Ibn Jumai' 's lacks nard and myrrh while it measures 6 drachms of sagapenum and opopanax instead of 8 drachms.¹⁷⁰ Muḥammad ibn Bahā' ash-Shirāzī, on the other hand, does not mention nard, and measures 20 drachmas instead of 5 drachmas of parsley.¹⁷¹ He also adds gum ammoniac and seeds of fennel which do not appear in any Arabic fragment. Despite all these minor differences it is possible to suggest that ps. Thabit's recipe was the source for both Ibn Jumai' and ash-Shirāzī.

Having tried to prove that ps. Thabit's recipe of hiera Rufi was the source for the afore-mentioned authorities, one notices that there are three recipes left. Those are the recipes of al-Qumrī B, Ibn Sīnā A and Ibn abi al-Bayān. It is striking that there are common significant features among them. First, there is an absence of aloe, galingale, and ginger which, though appearing in the rest of the Arabic

¹⁷⁰ In no Arabic recipe is 6 drachmas instead of 8 given for sagapenum or opopanax while that measurement appears in Greek frgs nos. 46 and 55.

¹⁷¹ Army Medical Library 10.

versions, do not appear in any Greek or Latin version.¹⁷² Second, those recipes measure 10 drachmas of germander, as do the Greek recipes, instead of 20 drachmas which all the Arabic recipes have. Besides al-Qumrī mentions agaricon, which, though appearing in the Greek recipes, is given by none of the other Arabic versions. Those differences suggest that these three writers used Arabic translations of Greek texts rather than Arabic translations of Syriac re-working of Greek texts. I believe that a translation of Oribasius' Synopsis was al-Qumri's source. The two agree on everything except that Oribasius adds cassia. al-Qumrī declares that Yuḥannā (I assume Yuḥannā ibn Massawaih or ibn Sarabiyūn) is his source. Yuḥannā ibn Massawaih was a Syriac speaker writing in Arabic, but he is not known to participate in the translation from Syriac into Arabic.¹⁷³ It is possible that either of the two (Yuḥannā) used a Syriac translation of Oribasius' Synopsis. al-Qumrī ends his paragraph on hiera Rufi by saying that Paul (I assume Paul of Aegina) adds to the afore-mentioned ingredients cassia and stoechoidos. This is an important statement as it proves two things: first, that at least one version of hiera Rufi which reached the Arabs was taken from a second-hand source (Paul of Aegina here). It also explains why the Arabs did not doubt Rufus' authorship as in Paul the hiera was definitely ascribed to Rufus without any doubt of Rufus' authorship. Secondly, there was an acknowledgement of

¹⁷² I'd like to emphasize here that aloe as a purgative or an ingredient of hiera was well known to the Greeks. Galen mentions several times hiera of aloe. See VI, 354; XIII, 129.

¹⁷³ Cf. the following chapter.

a Greek source rather than of a Syriac intermediary.

The two ingredients al-Qumrī attributes to Paul's recipe are interesting. Stoichoidos does not appear in Paul's version of hiera Rufi which we have. Neither does it appear in any Arabic recipe except in Ibn abi al-Bayān's where it is mentioned as an alternative for cassia. This, along with the similarities that both Ibn Sīnā's recipe as well as Ibn abi al-Bayān's recipe have with Paul's, suggests that Paul is the source for those two recipes.¹⁷⁴ Ibn Sīnā ends his two recipes of Rufus by stating that there is a third recipe in Syriac where 10 drachmas of ground pine, agaricon and horehound are added to his second recipe.¹⁷⁵ This in itself emphasizes the role of Syriac in the transmission from Greek into Arabic whether it was a straightforward translation or re-working on the Greek materials. It also indicates that there is an acknowledgement of the second-hand nature of the sources. This time it is the Syriac contribution.

Mentioning hiera Rufi

¹⁷⁴ They agree on the measurements of colocynth, germander, sagapenum, parsley, round aristolochia, pepper. However they disagree on the following nard, cinnamon, saffron. al-Qumrī lacks myrrh as well as cassia while it mentions agaricon which none of the Arabic recipes mentions.

In some of the Greek fragments there is syconia as an alternative to colocynth. In all the Arabic fragments such an alternative measure is not recorded. This could be explained by the fact that the two mean the same thing so the Arabic translator did not find it necessary to repeat the word twice.

¹⁷⁵ I think this Syriac recipe is a translation of Aetius' recipe as two of those three ingredients only appear in the Paris' manuscript.

We have just discussed what concerns the recipes of those who described hiera Rufi. Describing hiera was not the only way writers showed their interest and knowledge of it as there was a more simple way which was mentioning it. Those who mentioned hiera Rufi without describing it were ar-Rāzī, Ibn al-Jazzār (d. 1004), and Dawūd al-Antākī (d. 1599). ps. Thabit and al-Qumrī were the only authors who mentioned it as well as described it.

ps. Thabit, al-Qumrī, ar-Rāzī and Ibn al-Jazzār prescribe hiera Rufi for treating particular diseases.¹⁷⁶ Dawūd al-Antākī, on the other hand, is concerned with describing the main recipes of hiera.¹⁷⁷ All of them, except for ar-Rāzī, do not reveal their sources. While it is possible to assume that Dawūd might have different sources, however difficult to identify, it is impossible to identify precisely ps. Thabit's, al-Qumrī's and Ibn al-Jazzār's sources.¹⁷⁸

ar-Rāzī's sources are Philagrius and Yuḥannā Ibn al-Baṭriq. In the first fragment ar-Rāzī attributes to Philagrius a confirmation of the excellent benefit of hiera Rufi in treating gout. ar-Rāzī wraps up Philagrius' words in an Islamic garment.¹⁷⁹ In the second fragment ar-Rāzī quotes Ibn

¹⁷⁶ al-Qumrī, K. al-Ghinā wa al-Munā, Ms. Br. lib. Or. 5721, fol. 18 r 13, fol. 18 v 3, fol. 199 v -1 f.; Ibn al-Jazzār, K. Zād al-Musafir wa Ūt al-Hadīr, Ms. Dresden E a 209, fol. 19 v -4.

¹⁷⁷ K. Tadhkirat uli al-albāb, vol. I, pp. 90-92.

¹⁷⁸ Only in one occasion does al-Qumrī identify Thabit ibn Qurra as his reference. Ms. Br. lib. Or. 5721, fol. 199 v -1 f.

¹⁷⁹ ar-Rāzī, XI, p. 160.

al-Baṭriq who in his turn quotes Galen. Galen prescribes hiera Rufi with hellebore as a purgative for treating rabies.¹⁸⁰ This quotation is interesting because it suggests that as early as Galen's time there was already an identification of something called hiera Rufi, while we know that by the time of Oribasius there was not such an identification.¹⁸¹ A question raises itself is it authentic work of Galen ? Did Galen know of something called hiera Rufi?

Not only does the Arabic tradition attribute to Galen a knowledge of hiera Rufi but also do modern scholars. In two Greek fragments (nos. 75 and 76 in Ruelle-Darembert's edition) there is a mention of hiera Rufi. Frg. 76 which is taken from Aetius of Amida's work is a chapter on rabies.¹⁸² There is no correspondence between the afore-mentioned Arabic passage of Yuḥannā Ibn al-Baṭriq and Aetius' fragment except in paying attention to rabies. There is a problem of authenticity surrounding this fragment. Ruelle, the co-editor of the edition, attributes the fragment to Rufus, Galen and Posidonius. He, in fact, adds Galen's name while he is hesitant to accept Rufus' authorship of the chapter for the following reasons. Since Rufus would not call his hiera hiera Rufi but my hiera, and since the third authority to which this

¹⁸⁰ ar-Rāzī, XIX, p. 442.

¹⁸¹ See supra.

¹⁸² R.-D., p. 373, 9. Hiera Rufi is recommended for treating rabies if the doctor wants to evacuate and there is something to prevent using hellebore. One gives hiera every day not as a purgative but as a preventive. One gives the size of Pontic nut with one cyathos of decoction of salvia or of a herb iron which is called Heraclea. On a second occasion (p. 375, 19) Hiera (Rufi) is recommended annually for prevention.

chapter is attributed is Posidonius who may have come before Rufus,¹⁸³ it is implied that the third authority which is Galen knew of hiera Rufi. However it seems to me, as there are doubts about the validity of attributing this chapter to Galen, that the person who knew of hiera Rufi was Aetius who, having collected his sources including that on hiera Rufi, wrote that chapter.

Frg. 75 which discusses loss of memory is attributed both to Rufus and Galen. Hiera Rufi is recommended for therapy.¹⁸⁴ Ruelle has put between brackets the sentences which could be traced to Galen, but he has not included here the sentence where hiera Rufi is mentioned. It is possible to argue that mentioning hiera Rufi is Aetius' own addition to the text.

Moreover, I do not think that Galen knew of hiera Rufi as he did not mention it in his writings. What Galen knew was hiera of colocynth.¹⁸⁵ To go back to Ibn al-Baṭriq. I think that Ibn al-Baṭriq translated one of Galen's works. Having read hiera of colocynth Ibn al-Baṭriq might have very well translated it as hiera Rufi, the name by which it was already familiar to him.

In frg. 73 which is a teaching exposition of Rufus' chapter on epilepsy there is a recommendation of using hiera

¹⁸³ But there is a possibility that the Posidonius who is mentioned as a third authority in the text is Posidonius who lived in the fourth century A.D. If this is the case, it is then more probable that calling hiera Rufi as such appeared in medical texts after Galen's time.

¹⁸⁴ R.-D., p. 368, 25.

¹⁸⁵ XIII, 129; XIV, 327; XV, 539.

of colocynth.¹⁸⁶ Ruelle mentions that there is a problem of authenticity involving this fragment. This chapter is attributed in different places to Posidonius, Rufus and Philumenos separately. The problem of authenticity is significant in making us realize that hiera of colocynth was known to all of these authorities and above all it was not Rufus' invention.¹⁸⁷

To sum up: I have tried in this part of this chapter to ask questions about the sources the Arabic writers used to learn of hiera Rufi. It seems clear that their sources were Arabic translation of Syriac translations or of Syriac re-working of hiera Rufi. It is also evident that they used some Arabic translation of some Greek works. Whether it was via Syriac or not is hard to answer. Finally one can add that the Arabs appreciated hiera Rufi as they kept repeating it in their texts. In the following part of this chapter we are going to discuss if the Arabs had added more uses of hiera Rufi.

Diseases

My second aim is to detect any differences in using such a drug from the Greeks to the Arabs. We have already noticed that hiera of colocynth was initially recommended for

¹⁸⁶ R.-D., pp. 361-2, 5.

¹⁸⁷ Ruelle adds that in the Ed. and in the manuscript P. Galen's name is added to describe the authorship of hiera of colocynth. Ruelle does not discuss this difference as he considers it insignificant. R.-D., p. 362. I do not agree with Ruelle because this addition suggests that there was more than one recipe of hiera of colocynth attributed to more than one Greek writer.

pleurisy.¹⁸⁸ Later Rufus recommends its use for arthritis patients.¹⁸⁹ Hiera of colocynth can also be used in vertigo, heaviness in the head, threatening glaucoma, epilepsy, paralysis¹⁹⁰, loss of memory and rabies.¹⁹¹ It is also recommended for melancholy as a cathartic as well as an antidote as it helps to digest and it also expels flatulence.¹⁹² The most distinctive use of hiera is that it helps in diagnosis as it purges the head.¹⁹³ In other words as hiera has some effect on the head the physician can then look at the evacuated humours and diagnose better.

If we look at what the Arabs say about hiera Rufi we find they correspond with the Greeks in prescribing it for sciatica, epilepsy, hemiplegia and melancholy.¹⁹⁴ It could be assumed that it is for the sake of purging humours as well as for improving digestion. Ibn Jumai comes close to Aetius in

¹⁸⁸ R.-D., frg. 22; Galen, XV, 539.

¹⁸⁹ R.-D., De Podagra; frg. 22. Philagrius, according to ar-Rāzī, prescribes it for gout. See ar-Rāzī, XI, p. 160.

¹⁹⁰ R.-d., frg. 61. Bodleian Mss says hemiplegia instead of paralysis.

¹⁹¹ R.-D., Frgs. 75 and 76; Galen in ar-Rāzī's al-Hāwī, XIX, p. 442.

¹⁹² Frg. 61. This reminds the reader of the section on melancholy in this chapter where I have stated that Rufus' objective in treating melancholy is double, to improve digestion and to expel humours and that every thing he uses from purgatives and diet to surgery are directed towards that goal.

¹⁹³ Ibid.

¹⁹⁴ Muḥammad ash-Shirāzī prescribes it for sciatica. Sabūr ibn Sahl, al-Qumrī (Ms. 5721, fol. 18 a 13, fol 18 b 3), Ibn Sīnā and Najm ad-Dīn ash-Shirāzī prescribe it for melancholy while Ibn Jumai prescribes it for epilepsy and hemiplegia.

stating that hiera cleans the head by evacuating the thick humours, and that it strengthens the stomach, looses the wind and evacuates gently. There is also an understanding of hiera's effect on evacuating fatty, black and phlegmatic humours.¹⁹⁵

From this survey it is clear that the Arabs closely followed the Greeks in their recommendation for using hiera Rufi. It is interesting to notice that Sabūr, ps.Thabit, al-Qumrī, the two ash-Shirāzī and Ibn Sīnā recommended hiera Rufi for treating alopecia.¹⁹⁶ Such a recommendation for that particular disease is not recorded in any Greek fragment of Rufus. Yet one can notice that Galen recommends hiera of colocynth for treating alopecia.¹⁹⁷ If we believe that the two hiera mean in fact the same thing, as ps. Thabit himself admits, it is then probable that those Arabic authorities did not bring a new use of the drug but perhaps were influenced by Galen.

The only two differences I can detect are in the works of ps. Thabit and ibn al-Jazzār.¹⁹⁸ ps. Thabit recommends it for atresia of the uterus while Ibn al-Jazzār recommends it - or

¹⁹⁵ Ibn Jumai' prescribes it for fatty humours, Muḥammad ash-Shirāzī and Ibn abi al-Bayān prescribe it for phlegm and black. Ibn Sina and Najm ad-Dīn ash-Shirāzī prescribe it for phlegm.

¹⁹⁶ ps.Thabit ibn Qurra talks about his own clinical experience in treating that disease with hiera Rufi. Notice that al-Qumrī quotes Thabit's passage without describing hiera Rufi in the same passage. Ms.Br. lib. Or. 5721, fol. 199 v -1 ff.

¹⁹⁷ XIV, 327.

¹⁹⁸ ps. Thabit, op. cit., p. 117.

some other hiera among other things- for treating a disease called Da' al-baiḍa (a tumour in the skull) when it is caused by thick wind (air).¹⁹⁹ No Greek fragment prescribes hiera Rufi for treating those particular diseases.

Method of preparation

Perhaps the relatively detailed accounts of the methods the Arabs have given for preparing hiera Rufi distinguish them from their Greek predecessors. Generally the Greek fragments prescribe mixing the ingredients with sufficient amount of honey. In order to give it to the patients the doctor mixes the drug with honey water or water and salt, the maximum amount is four drachms. On the other hand the Arabs add more steps for preparing the drug.²⁰⁰ The first step is to collect all the medicaments, grind in mortar and sift them.²⁰¹ Then one mixes them with honey which has been boiled and from which the foam has been removed. Some Arabic recipes specify the amount of honey as triple the quantity of medicaments.²⁰² Before mixing the ingredients with honey, some authors prefer

¹⁹⁹ Ibn al-Jazzār, Zād al-Musafir wa Out al-Haḍīr, Dresden E a 209, fol. 19 v -4.

²⁰⁰ al-Qumrī does not give a way of preparation. He refers to a previous recipe which I have not transcribed.

²⁰¹ Only does Greek fragment 44 mention mincing the ingredients.

²⁰² Ibn abi al-Bayān; Ibn Jumal^c and Muḥammad ibn Bahā' ash-Shirāzī.

soaking them first in wine.²⁰³ Also in some of the recipes this drug, having been prepared, has to be stored for six months before use.²⁰⁴ Only Ibn Sīnā mentions preparing the potion before giving it to the patient. He prescribes mixing it with warm water, honey and salt for it should be given in the morning before breakfast.²⁰⁵ The amount that should be given to the patient varies from two mithqal to four. Muḥammad ibn Bahā' ash-Shirāzī gives an alternative for making it either as pastilles (pills) or paste.²⁰⁶

Conclusion

In this part of this chapter I have paid attention to a recipe which was very much celebrated among the Greeks as well as the Arabs. I have discussed how it became known to the Greeks of later generations under Rufus' name. I have also pointed at its success among the Arabs. The Arabs, while they hardly added uses of it other than those which were already

²⁰³ While Ibn Sīnā specifies that myrrh is to be soaked in wine, Najm ad-Dīn ash-Shirāzī says that those which are benefited from soaking are to be soaked. Muḥammad Ibn Bahā' ash-Shirāzī and Ibn abī al-Bayān do not specify any ingredient but all of them are to be soaked.

²⁰⁴ Ibn abī al-Bayān and Ibn Jumai'.

²⁰⁵ Ibn abī al-Bayān also says it is to be mixed with warm water.

²⁰⁶ The weights the Greeks and the Arabs use are worth of mentioning here. *De podagra*, fragments nos. 22, 46, 55, 61 (Ms. Paris) and 119 use drachm while frg.61 (Bodleian) uses ounce. While ps.Thabit, al-Qumrī A, Ibn Sīnā B, Ibn Jumai' and Najm ad-Dīn ash-Shirāzī and Muḥammad Ibn Bahā' ash-Shirāzī use dirham (Arabic of drachma) al-Qumrī B, Ibn Sīnā A and Ibn abī al-Bayān use mithqāl. Mithqal, according to al-Mu'jam al-Wasit is one and three quarters of a dirham.

known to the Greeks, paid more attention to its preparation, which might be their own contributions in that aspect. However they did not raise the problem of Rufus' authorship. One of the reasons is the nature of the transmission from Greek into Arabic. Their appreciation of Rufus' knowledge of botany was so so high that they did not raise the issue of authorship. The efficacy of the drug and their estimation of Rufus knowledge made some Arabic writers such as Ibn Jumai' and Ibn abi al-Bayān attribute to Rufus the invention of hiera in general. The Arabs' high appreciation of Rufus' drug was influential on Latin writers as one can see in Valascus' words where he quotes Ibn Sarabiyūn who is recommending hiera Rufi for melancholy.²⁰⁷

It is not surprising to find, in a humoral orientated medicine such as the ancient and the medieval medicine, a purgative such as Hiera Rufi very much appreciated. The object of ancient or medieval doctor is to either to expel the noxious humours or to reform them or the two together. He uses his tools from diet to surgery to pharmacy to achieve such goals.

²⁰⁷ Valascus de Tarenta's book Philonium, p. 57. Valascus prescribes hiera Rufi for abscess of uterus (p. 517) and also for elephantiasis (p. 656). His source for the first disease is Theodoric (probably Theodoric the bishop of Cervia who died in 1298) while Bernard de Gordon (d.c. 1308) is his source for elephantiasis.

Chapter Six. Rufus among the Arabs

Chapter Six. Rufus among the Arabs

Throughout this study the impact of Rufus' surviving materials in Arabic has been significant in shaping, correcting, and enriching our knowledge of Rufus' ideas. The Arabic materials stand in contrast with an almost total absence of Rufus' name among Medieval Latin writers. While we have a list of over thirty six Arabic writers (see appendix) who mentioned Rufus, we have only three Latin writers.¹ The Arabic writers' interest in Rufus and the multitude of Rufus' Arabic fragments inevitably lead us to inquire about those translators who carried the mission of translating Rufus' works in Arabic and the time that witnessed such translations. It is also interesting to investigate which of Rufus' writings won the translators' interest. The topics of these Arabic writings in which Rufus is quoted and the possible manner (whether directly from Arabic translations of Rufus or indirectly through second-hand sources) by which they learnt of him are to be discussed here. It is worth discussing also how the Arabic authors received and responded to Rufus' teaching. The aim of this chapter is to increase our knowledge

¹ Rufus is mentioned in De Virtutibus Herbarum of Rufinus (fl. 13 century), also in Pandectae Medicinae or Liber cibalis et medicinalis Pandectorum of Matthaeus Sylvaticus (c. 1340) and in Philonium of Valascus de Tarenta (c. 1382 - 1418). While Rufinus is interested in Rufus' knowledge of plants, Valascus quotes hiera Rufi and Rufus' therapy for alopecia. However, I could not check Rufus' citations in Matthaeus Sylvaticus' work because Ruelle, who is my source, declares that his source, Fabricius, did not list Rufus' citations. See R.-D., p. LI. I have discovered Rufinus while reviewing Hossam El-Khadem's edition of Ibn Buṭlān's book Taqwīm al-Siḥḥa, while Ruelle and Daremberg are my source for both Sylvaticus and Valascus.

of the transmission from Greek into Arabic which was one of the characteristics of the Arabic-Islamic civilization.

Rufus is quoted in several Arabic works whose topics are biography and bibliography ², dietetics ³, materia medica ⁴, obstetrics and paediatrics ⁵, specific diseases ⁶, general as well as medical encyclopedias ⁷, hygiene ⁸, toxicology ⁹,

² Ibn an-Nadīm, K. al-Fihrist; al-Mubashshir, K. Mukhtār al-Hikam wa mabasin al-Kalim; Ibn al-Qiftī, K. Tarikh al-Hukamā; Ibn al-Ibrī, K. Mukhtasar Tarikh ad-Duwāl; ibn abi Uṣaibi'a, 'Uyūn al-anbā'; ash-Shahrazūrī, K. Raudat al-afrāh wa nuzhat al-arwāh; Hajji Khalifa, Kashf az-zunūn 'an asāmi al-Kutub wa al-funūn.

³ Ishāq Ibn Sulaiman al-Isra'ilī, K. al-Aghdhiya.

⁴ Sabūr Ibn Sahl, K. al-Akrabadhīn al-Kabīr; Ps. Thabit Ibn Qurra, K. adh-Dhakhira fī 'ilm al-tibb; Ibn al-Jazzār, K. al-Itimad fī al-Adwiya al-mufrada; Ibn al-Baitār, K. al-Jamī li mufradāt al-adwiya wa al-aghdhiya; al-'Abas ar-Rasūli, K. al-Lum'a al-Kafiya fī al-adwiya ash-shāfiya; Ibn abi al-Bayān, K. ad-Dustūr al-Bimaristanī.

⁵ al-Baladī, K. Tadbīr al-Habalā w-al-Atfāl; ibn al-Jazzār, K. Siyasat aṣ-Ṣibyān wa tadbīrihim.

⁶ Ishāq Ibn 'Imrān, M. fī al-Malikhuliya; 'Abd al-Latīf al-Baghdadi, (fi) al-Maraḍ al-musamma Diyabita.

⁷ an-Nuwairī, K. Nihayāt al-arab fī funūn al-adab. For medical encyclopedia see Ps. Thabit, K. adh-Dhakhira fī 'ilm al-tibb; ar-Rāzī, K. al-Hāwī; Ya'qūb al-Kashkarī, al-Kunnāsh fī at-tibb; al-Qumrī, Kunnāsh al-Ghinā w-al-Munā; Ibn al-Jazzār, K. Zād al-Musafir wa Oūt al-Hadir; Ibn Sīnā, K. al-Qanūn fī at-tibb; Ibn al-Maṭrān, K. Bustān al-atibbā wa raudat al-alibba; Ibn Jumāf, K. al-Irshād li masalih al-anfus wa al-ajsād; Ibn Hubal, K. al-Mukhtarāt fī al-tibb; ash-Shirāzī, K. al-Hāwī fī 'ilm al-tadawī; al-Anṭākī, K. Tadhkirat uli al-albāb.

⁸ al-Burqumanī, al-Maqala al-Muhsinya fi Hifz as-Sibha al-Badaniya.

⁹ al-Mubārak, K. al-Munkidh min al-halak fi daf' maddar as-sama'im al-muhlika.

magic ¹⁰, characterology ¹¹, sexology ¹², philosophy ¹³, zoology ¹⁴, geography ¹⁵ and even literature.¹⁶ Rufus first appears in the ninth century and continues to appear in Arabic writings from the ninth century till the eleventh; he almost disappears in the twelfth, but is back again in the thirteenth and fourteenth to be only once mentioned both in the fifteenth and sixteenth. He makes his last appearance in Arabic in the bibliography of Hajji Khalifa which goes back to the seventeenth century. Yet one should not explain his disappearance through the ages as a reflection of a loss of interest in him for it rather reflects the nature of the materials preserved.

Though we are fortunate to know almost the exact date of the translation of some Greek authors such as Galen into Arabic, through their Arabic translators (Iṣḥāq ibn Ḥunain and Yuḥannā ibn al-Baṭriq) we are less fortunate with other authors such as Rufus. However the first ever mention of Rufus in Arabic writings, as far as we know, was in the writings of those who were Syrians by origin. Those were Sabūr ibn Sahl (

¹⁰ al-Majritī, K. Ghayāt al-Ḥakim.

¹¹ Qusṭā Ibn Luqā, K. Ikhtilāf an-nas.

¹² Idem, K. al-bah and also K. fi al-bah wa ma yuḥtaju ilaihi min tadbīr al-badan.

¹³ Miskawaih, Maqala fi an-nafs wa-l-‘aql.

¹⁴ al-Marwazī, K. Tabā‘i‘ al-Ḥayawān.

¹⁵ al-Mas‘ūdī, K. at-tanbih wa al-Ishrāf.

¹⁶ ar-Raḡīq an-Nadīm, Outb as-Surūr fī ausāf al-Khumūr.

d. 869) and Qusṭā ibn Luqā (b. 820-d.912).¹⁷ Qusṭā ibn Luqā was known as a translator into Arabic as well as an original writer in Arabic. ar-Raqīq an-Nadīm attributes to him the translation of Rufus' book On Wine.¹⁸ Moreover, Qusṭā, in some of his works, shows a knowledge of Rufus' ideas on coitus and homosexuality.¹⁹ He in fact describes Rufus as " one of the chief doctors whose books we have read ".²⁰ In other words it is probable that Qusṭā translated more than one book of Rufus and hence it is likely that Qusṭā was one of Rufus' translators into Arabic. As for Sabūr ibn Sahl, our information indicates that he belonged to the group of Syrian writers who were writing in Arabic. On the other hand I have no evidence that he was a translator and there is nothing to suggest that he might be a translator of Rufus' works.²¹ Sabūr quotes the recipe known as hiera Rufi in his book al-

¹⁷ Rufus was also quoted by Thabit ibn Qurra (b. 834-d.901) in K. adh-Dhakhira. However because of doubts over the authenticity of that work, I cannot accept the assumption that Thabit was one of Rufus' translators. Cf. Ullmann, Die Medizin im Islam, p. 136 for the doubts over the authenticity. See also Meyerhof, " The "Book of Treasure", an early Arabic Treatise on medicine" in Isis 14, 1930, pp. 55-76.

¹⁸ ar-Raqīq an-Nadīm, K. Quṭb as-Surūr fi ausāf al-Khumūr, ed. Ahmad al-Jundi, p. 227.

¹⁹ Cf. Qusta's following books : K. Ikhtilāf an-Nas; K. fi l-bah; K. fi l-bah wa ma yuhtaju ilaihi min tadbir al-badan fi sti'malihi.

²⁰ Ullmann defines Qusta as some one who " produced numerous translations from the Greek, among which were works of Rufus of Ephesus". Ullmann, Islamic Medicine, p. 43.

²¹ Degen and Ullmann did not raise the possibility that Sabur was a translator. They in fact dismissed the reports that Sabur's work was translated from Syriac in favour of being an original Arabic work. Degen and Ullmann, " Zum Dispensatorium des Sabur ibn Sahl" in Die Welt des Orients 7, 1973-1974, pp. 241-258.

Akrabadhīn al-Kabīr. This might reflect the Arabs' early interest in pharmacopoeia.

Though Ḥunain Ibn Ishāq (b. 809 - d. 873 or 877) did not claim that he translated Rufus' works, his own works show some knowledge of Rufus. Ḥunain wrote a book on the diet of old people in Syriac using Galen's and Rufus' relevant books as his sources.²² He also wrote a book in Syriac on dietetics which he later translated into Arabic where Rufus appears as one of Hunain's sources.²³ In addition he wrote an exegesis of Rufus' book On Principles of health preservation.²⁴ According to Ibn abi Uṣaibi'a, Ḥunain attributes to Rufus two books wrongly attributed to Galen.²⁵ If one bears in mind that

²² Ibn abi Uṣaibi'a, 'Uyūn al-anbā', vol. I, p. 323.

²³ Rainer Degen, " The Kitab al-Aghdiya of Hunayn ibn Ishaq", in the Proceedings of the first international symposium for the history of Arabic science, Institute for the History of Arabic science, 1978, vol. II, pp. 291-299.

²⁴ Ibn abi Uṣaibi'a, op. cit., I, p. 200. Unfortunately Ibn abi Usaibi a does not mention the language in which Hunain wrote the book. Steinschneider claims that Hunain translated Rufus' text and that ar-Razi who quoted Hunain's comments on the translation, attributed the book to Rufus and not to Galen. Moritz Steinschneider, " Rufus, de morbo icterico, etc." in Deutsches Archiv für Geschichte der Medizin, repr. 1971, vol. 1, p. 133; idem, Die arabischen Übersetzungen aus dem Griechischen, Graz, repr. 1960, p. 472. Though ar-Razi in fact, attributed the book to Rufus (ar-Razī, IX, p. 136) it is hard to prove that he quoted Hunain's comments on the text. As for Hunain being the translator, what Ibn abi Usaibi a attributes to Hunain is the interpretation of the book and not its translation.

²⁵ These books are On Jaundice and On the dissection of the eye. Ibn abi Uṣaibi'a, op. cit., vol. I, pp. 95, 101. Hunain denounces Galen's authorship of the book On Eye Dissection and claims that it should be attributed to Rufus or some one older (or inferior ?) نه هو دونه. Besides the two books on whose authorship Hunain comments, ar-Razi thinks that the book On Clysters which is attributed to Galen belongs to Rufus. See ar-Rāzī, VIII, p. 170. Ruelle claims that the book On Clysters was translated into Arabic by Hunain and later on

the books attributed wrongly to Galen while they should be attributed to Rufus were in fact translated by Ḥunain, one can then claim that Ḥunain, was one of Rufus' translators. Yet a problem remains; Ḥunain did not claim that he translated Rufus.²⁶ To claim that he translated Rufus without any internal evidence is hard to maintain. However, the possibility that a member of Ḥunain's school of translation translated Rufus into Arabic cannot be ruled out.²⁷

ar-Rāzī, in his book al-Hāwī, occasionally names the sources from whom he has learnt about some of the Greek authors. In Rufus' case there is Ibn Masawaih (c.777-857) who was of Syriac origin.²⁸ as ar-Rāzī did not know Syriac, he must have read Ibn Masawaih in Arabic. Ibn Masawaih's work must have been an original work and not a translation of one of Rufus' works for we know that Ibn Masawaih did not

translated into Latin and Hebrew. R.-D., p. XXXV, f.n.5. Ruelle might have in his mind ar-Rāzī's attribution of the book to Rufus. Knowing that Ḥunain translated the book into Arabic, Ruelle concluded that Ḥunain translated Rufus' book.

²⁶ Ḥunain mentions in his Risala that Ayyūb translated (into Syriac) On Eye Dissection which is attributed to Galen and which should be attributed to Rufus or someone else and that he summarised it, with some help, for Yuḥanna Ibn Masawaih. Cf. G. Bergsträsser, Hunain ibn Ishāq über die Syrischen und Arabischen Galen Übersetzungen, Leipzig, 1925, p.23.

²⁷ Ishāq Ibn Hunain did not include Rufus in his work Tarikh al-atibbā'. See Sezgin, Geschichte des Arabischen Schrifttums, III, p. 64; Franz Rosenthal, " Ishaq B. Hunayn's Ta'rih al-Atibba" in Oriens 7, 1954, pp.61-71 (Arabic text). Yet this should not be taken as a sign of Ishaq's ignorance of Rufus. Rosenthal has pointed out that this work is not complete. It is then still possible to suggest that a member of the school of Hunain translated Rufus.

²⁸ ar-Rāzī, II, p. 226; X, p. 72; XIX, p. 409. al-Qumrī quotes a recipe of hiera Rufi via Yuḥannā (probably Yuhanna ibn Masawaih). See the section on hiera Rufi in chapter five.

translate into Arabic himself.²⁹ This could only mean that Ibn Masawaih composed his work in Arabic using the available translations into either Syriac or Arabic. In other words one can take Ibn Masawaih as a terminus before which (or even during his life) Rufus was translated into Arabic. That would mean the ninth century.³⁰

The availability of Syriac translations of Rufus at that time is interesting. It raises the question about the number of languages Rufus could be found in and it also leads us to inquire about the way the Arabic versions of Rufus have come about. Ullmann divides the period of translation into Syriac into two. The first was in the sixth century and represented by Sergius ar-Ras ini. The second period was in the ninth century, whose major representatives were Hunain Ibn Ishaq and his school.³¹ There is no indication of the time that witnessed Rufus' translation into Syriac. Yet we have no evidence to back up a claim that every work of Rufus was translated first into Syriac and that in the age of translation in the ninth century. Syrian translators usually translated such works into Syriac before translating them into Arabic, as it is known of Hunain Ibn Ishaq's school. However

²⁹ Ullmann, Islamic Medicine, p. 41.

³⁰ Leclerc mentions Sarabiyun and Masawaih as evidence of Rufus being translated into Arabic. Lucien Leclerc, Histoire de la médecine arabe, I, pp. 239-242. Ibn Sarabiyūn was also of Syriac origin and was known for some original works in Syriac (Ibid. pp. 113-117). He must have had at his disposal a Syriac translation of Rufus. Ibn Sarabiyūn's work was later translated into Arabic. One can assume that, as ar-Rāzī quoted Ibn Sarabiyūn's work, Ibn Sarabiyūn's work was translated between his time and ar-Rāzī's time i.e. in the ninth century.

³¹ Ullmann, Islamic Medicine, pp. 15-16.

one can suggest the ninth century as a date of Rufus being translated into Arabic before he makes his appearance in the Arabic medical literature.³²

What did they translate ? We have received only two complete Arabic versions of Rufus' works. These are his book On Jaundice and a case-histories work known by its German title, given by its German editor, as Krankenjournal. There are some doubts surrounding Rufus' authorship of the latter work which I have discussed in a previous chapter. Besides these two relatively complete works we have a multitude of fragments. Occasionally there are some references to the book to which these quotations belong, given by the Arabic writers, but on other occasions there is no such reference. On the other hand the Arabic biographers Ibn an-Nadīm and Ibn abī Uṣāibiā give lists of Rufus' works, to which I have given a translation in the first chapter where I have also asked some questions about the reliability of the number of these works : whether they are parts of bigger books or independent books. It seems that one of the reasons for the long list of Rufus' books can be found in the sources the Arabic writers themselves used. They might have used Oribasius' and Aetius' medical encyclopedia, which are divided into many chapters and where Rufus is quoted for particular themes. That means that the Arabic writers' knowledge of Rufus need not be direct but through an intermediary. ar-Rāzī backs up this argument when

³² Besides the quotations in Syriac which appear in the Syriac version of K. al-Aghdhviah of Hunain there are some Syriac fragments of Rufus in Mingana 594 and 661 which I have been unable to see. See Rainer Degen, " Ein Corpus Medicorum Syriacorum ", in M.H.J. 1972, 7, pp. 114-122 (p. 120).

he mentions Oribasius as well as Paul as his sources of Rufus.³³ However Ishāq Ibn 'Imrān mentions Rufus' book on melancholy as his source. He also excerpts some information which does not appear in either Oribasius or Aetius.³⁴ It is certain that Byzantine encyclopedias were translated and used by Arabic writers.³⁵ However some of Rufus' complete works

³³ Steinschneider maintains that ar-Rāzī did not everywhere obtain direct translations of Rufus and that he cited some chapters as books. Cf. M. Steinschneider, "Constantinus Africanus und seine Arabischen Quelle" in Virchows Archiv, vol. 37, 1866, p. 403. He also interprets the large number of titles in the lists of the Arabic biographers to be parts of works or chapters of medical encyclopedias. Idem, Die arabischen Übersetzungen aus dem Griechischen, Graz, repr. 1960, p. 469. I agree with Steinschneider that ar-Rāzī did not always quote Rufus at first hand. Yet, there is some evidence that he occasionally obtained direct translations of Rufus' work as in the case of Rufus' book On Joint Diseases. The original Greek text has not survived except for a fragment which appears in Oribasius' Synagogai which does not correspond with any of the Arabic fragments. The Arabic fragments, on the other hand, correspond with the Latin version of the text known as De Podagra. Therefore it is probable that ar-Rāzī used an Arabic translation of Rufus' lost Greek text.

As for the second-hand sources I agree with Ilberg on stating that ar-Rāzī did not use Oribasius' Synagogai but Synopses to quote Rufus on aphrodisiacs and induration of the kidneys. Cf. Ilberg, Rufus von Ephesos, p. 39. Moreover there is a recipe of Rufus' which appears in both ar-Rāzī and Ibn Sīnā and is taken from Oribasius' Synopsis. Cf. Oribasius, Synopsis, III, 88; ar-Rāzī, X, p. 302; Ibn Sīnā, al-Qanūn, Baghdad, repr. 1970, II, p. 541.

³⁴ One should bear in mind that the Arabic writers dealt with their sources in a third way, that is by not declaring them. Flashar maintains that Ibn Imran did not explicitly excerpt Rufus. Helmut Flashar, Melancholie und melancholiker, p. 89. This is interesting, as having worked on Ibn al-Jazzār's K. Siyasāt aṣ-Ṣubḡān wa tadbīrihim, I have discovered a greater correspondence between Rufus and Ibn al-Jazzār than Ibn al-Jazzār admits. Cf. Ibn al-Jazzār, K. Siyasāt, p. 62 with Orib. Coll. Med., lib. inc. 12, p. 120,7; ibid., lib. inc. 20, p. 157, 10; see also Ibn al-Jazzār, Siyasāt, p. 71; Orib. Coll. Med. lib. inc. 13, p. 121, 3.

³⁵ Hunain ibn Ishāq attributes to Stephen (a contemporary of his) the first version in Arabic of Oribasius' seventy books on medicine. Cf. Meyerhof, " New Light on Hunain ibn

must have been also translated into Arabic and used by those Arabic writers, but their use was always subject to their availability, which might be less than that of other Arabic authors who are themselves quoting Rufus. The same availability of materials may stand as a defence against Sezgin's claim that Ibn al-Baitār did not use Rufus directly. As I understand Sezgin, Ibn al-Baitār had to use an Arabic source instead of using Rufus' work directly.³⁶

It is also interesting to note, as it is implicitly assumed by Sezgin, that Rufus was known to the eastern part of the Islamic world as well as to its western part.³⁷ However one can see that Rufus is quantitatively more quoted by writers from the eastern part than those of the western part. Perhaps one can explain it by the fact that most early Arabic medical writers came from the eastern part. The slow transmission of materials and their availability to the writers of the western part is perhaps an additional explanation. ✓

For the difficulty of assessing all the materials in order to investigate the Arabic response to Rufus' teaching, I have chosen two cases to be the focus of this chapter. These two cases are not medical in the strict sense of the word. In fact the first example is about a wonder tale prevalent in the

Ishāq and his method" in *Isis*, 1926, VIII, p. 706. Ibn al-Qiftī attributes to 'Isa ibn Yaḥyā (a disciple of Ḥunain) a share in Ḥunain's Arabic version of Oribasius' seventy books on medicine. *Ibid.*, p. 710.

³⁶ Fuat Sezgin, *op. cit.*, p. 65.

³⁷ *Ibid.*, pp. 64-5.

Middle Ages and attributed by some Arabic authors to Rufus. It is interesting to study its relation with medicine and specifically with a Greek physician i.e. Rufus of Ephesus. The second example deals with the relation between philosophy and medicine.

The poison maiden

Indian, Persian, Arabic and Latin literature preserve an interesting story about a slave girl who was brought up on poison until it became an acquired part of her nature so that she was not harmed by it.³⁸ She was then given by her master to his enemy, to kill him by having intercourse with him. I shall be focusing here on the appearance of this story in the Arabic writings and discussing how it became known under Rufus' name to two Arabic authors Ibn Sīnā and Ibn Hubal. Ullmann has listed the various Arabic writings where this story is mentioned.³⁹ It appears in the toxicological works of Shanāq⁴⁰, ibn Wahshiya⁴¹ as well as in the medical

³⁸ For Indian literature see Kaviraja Kunja Lal Bhishagratna, An English translation of the Sushruta Samhita, Calcutta, vol.II, 1911, p. 673.

Martin Levey attributes the story to al-Jurjani the Persian writer. Martin Levey, Medieval Arabic Toxicology: The Book On Poisons of ibn Wahshiya and its relation to early Indian and Greek Text, Transactions of the American philosophical society, vol. 56, part 6, 1966, p. 15. See also Claude Thomasset, Commentaire du Dialogue de Placides et Timéo: Une Vision du monde à la fin du XIIIe siècle, Gêneve 1982, pp. 74-75, 80. For some Latin titles see infra.

³⁹ Ullmann, Die Medizin im Islam, p. 322.

⁴⁰ Shanāq's K. as-Sumūm is attributed by its Arabic translator to the Indian physician Shanāq (Shanāq is the Arabic form of the Indian name) who was living around the

encyclopedias of aṭ-Ṭabarī (810-855 ?), ar-Rāzī, Ibn Sīnā and Ibn Hubal (1112-1213).⁴² It also appears in Sirr al-Asrār, an Arabic translation by Yuḥannā Ibn al-Baṭriq of a Greek work attributed to Aristotle. This book deals with the best ways of governing.⁴³ Finally it appears in al-Qazwinī's (1203-1283) K. 'Aja'ib al-makhlūgāt, a book on the wonders of God's

fourth century B.C. This work was translated first from the Indian into Persian by an Indian physician called Mankah, then from Persian into Arabic during the reigns of the Abbasids. For an edition of the Arabic text see Bettina Strauss, Das Giftbuch des Sanag: Eine literaturgeschichtliche Untersuchung, in : Quellen und Studien zur Geschichte der Naturwissenschaften und der Medizin 4, Heft 2 1934. 7

⁴¹ Ibn Waḥshiya (fl. 900-930) wrote his book K. as-Sumūm wa-t-tiryagāt in Arabic. He claimed that it was a translation of a Nabatean work on poisons. This book as its title announces is a book on the various kinds of poisons that kill by hearing or sight or contact. See Ms. Brit. lib. 1537 (=Add. 23604), fol. 30 a 9 ff, fol. 103 a 3 ff., and for an English translation of the text see Martin Levey, op. cit.

⁴² 'Alī Ibn Rabbān aṭ-Ṭabarī, Firdaus al-Hikma, edited by M. Z. Siddiqi, Berlin 1928, p. 449; ar-Rāzī, Kitāb al-Hawī, XIX, pp. 298, 318; Ibn Sīnā, Kitāb al-Qanūn fī at-tibb, Baghdad, repr. 1970, vol. III, p. 219; Ibn Hubal, K. al-mukhtarāt fī l-tibb, Book IV, p. 156, vol. II, Haydarabad, 1363 A.H, 1943 A.D.

⁴³ Sirr al-Asrār was edited by 'Abd ar-Rahman Badawi in Fontes Graecae Doctrinarum politicarum Islamicarum, pars prima, Cahirae, 1954. For the story see p. 84.

Sirr al-Asrār had some influence on Placides et Timéo which is a thirteenth century French dialogue between a philosopher (Timéo) and his disciple (Placides). In the dialogue, the story's characters are Alexander, Aristotle, Socrates and a king of whose origin there is no mention. This king sent the poisonous girl to Alexander. Cf. Claude Alexandre Thomasset, ed., Placides et Timéo ou Li secrets as philosophes, Paris 1980, pp. 109-113.

Ullmann mentions Turba Philosophorum, a twelfth century Latin treatise whose author is anonymous, as another source for this story. The Turba is an assembly of Greek, Arabic and possibly Latin philosophers who discuss several alchemical and theological points among which a poison woman is mentioned. The Turba is assumed to have an Arabic origin. Cf. Julius Ruska, Turba Philosophorum, Berlin, rep. 1970, Sermo LIX. Paulette Duval edited the French version of Turba in Les cahiers de Fontenay no. 33, December 1983.

creation in plants, animals etc..⁴⁴

If we look at the details of this story in the aforementioned writings, we find that in most of them there is silence about the diet this girl should follow in order to adopt this poisonous nature.⁴⁵ Ibn Wahshiya mentions that there is a certain diet that had to be followed from the girl's birth onwards. However, he refrains from recording it through, as he admits, his inability to understand it.⁴⁶ Only al-Qazwinī mentions aconite, as a plant to be given as a diet for its poisonous effect. His prime concern is, in fact, to list the properties of aconite among which is the poisonous effect. He even mentions the manner by which this plant could be given gradually to this girl. He says that this plant was first scattered under the little girl's cradle for a while, then under her bed, then underneath her clothes for a third period of time, and so forth until she ate from it and was no

⁴⁴ Ferdinand Wüstenfeld, ed., K. 'Ağā'ib al-maḥluqāt wa-ğrā'ib al-mawḡudāt, vol.I, Göttingen, 1849, p. 276.

Levey also mentions Jabir Ibn Hayan as another authority in whose work this story appears. Martin Levey, op. cit., p. 15. Yet Jabir's story is about a king who, for some motive, gave his slave girl something to drink which drove the girl to death. As is clear, this is a very different story from the relatively common version we meet in the aforementioned writers. Cf. Alfred Siggel, Das Buch der Gifte des Gabīr ibn Hayyān: Arabischer Text in Faksimile, Wiesbaden 1959, pp. 107-108 (fol.99a).

⁴⁵ Shanāq, Pseudo-Aristotle, ar-Rāzī and aṭ-Ṭabarī mention that she is to be fed on poison but they do not specify its kind.

⁴⁶ Ibn Waḥshiya, op. cit., fol. 103 a 3 ff. Small basilic is mentioned in the text. Yet the manuscript does not help to identify it as a part of the diet which ibn Wahshiya refers to. Levey's English translation of the text does not refer to it at all. Levey used Valieddin 2542, fol. 139 a to 227 b and Sehit Ali 2073 fol. 133 a to 159 a for his English translation.

longer harmed by it : then her dietetic upbringing was complete.⁴⁷ at-Ṭabarī mentions another way. He says that the girl takes hot poison with her mother's milk, then increases the amount gradually until she gets accustomed to it and is nourished by it. The rest of the authorities do not mention the manner that it is to be followed in giving the poison. The idea that a human being could feed on poison in order to acquire a poisonous nature while being immune himself or herself from it is interesting. In the story of Mithridates, the ruler of Pontus, he eats poison and becomes immune from it.

The girl is capable of transmitting poison through her perspiration ⁴⁸, breathing ⁴⁹ and sexual intercourse ⁵⁰ which is the most prevalent manner. Her poisonous nature has an effect on animals, birds and plants. ar-Rāzī mentions that the girl's saliva kills chickens and animals. When she touches plants, they wither, while flies do not approach her. Her poison is instantly fatal. Kings or enemies who happened to embrace her or sleep with her meet their fate instantly without delay. None of these authorities discusses therapy. This could be due to the immediacy of death. Shanāq said clearly that there was no cure for it and the only therapy was

⁴⁷ Al-Qazwinī, op. cit., p. 276.

⁴⁸ Pseudo Aristotle, op. cit., p. 84.

⁴⁹ Ibn Waḥshiya, op. cit., fol. 103 a 3 ff.; at-Ṭabarī, op. cit., p. 449.

⁵⁰ Shanāq, op. cit., p.14; Ibn Waḥshiya, op. cit., fol. 103 a 3 ff.; Pseudo-Aristotle, op. cit., p. 84; at-Ṭabarī, op. cit., p. 449; al-Qazwinī, op. cit., p. 276.

to avoid her.⁵¹

It is strange to find Ibn Sīnā and Ibn Hubal attributing the story of the poison maiden to Rufus whereas the earlier Arabic sources attribute it to the Indians or to the Nabateans or are, like ar-Rāzī, silent about its source.⁵² In other words, it is strange to attribute this story to a Greek writer such as Rufus.⁵³ That should not mean that Classical Antiquity was free from such tales and the example of Mithridates was universally famous. Pliny and other writers have some strange tales such as the dangerous effects of menstruating women. Besides Rufus is not the only Greek authority to whom this story is attributed. We have already mentioned ps.Aristotle's Sirr al-Asrār. Though this work is apocryphal there are connections between Alexander and the Indians.⁵⁴ In other words one could find justifications for attributing such an oriental tale to Aristotle. One can look for some possible justification in Rufus' case. Neither Ibn Sīnā nor Ibn Hubal mentions the book of Rufus they are both quoting. That could mean that they used a second-hand Arabic reference. Perhaps if

⁵¹ Shanāq, op.cit., p. 26.

⁵² ar-Rāzī, XIX, p. 298 which is repeated verbatim in XIX, p.318 with Ibn al-Baṭrīq as a reference. ar-Rāzī's silence could be due to either the nature of his work as being his private notes or the brevity of his source, Ibn al-Batriq.

⁵³ Ibn Sīnā, in the same passage, attributes to Galen a saying about old women using aconite and being not harmed by it.

⁵⁴ Alexander invaded India (Arrian's account has survived). Aristotle was Alexander's master and was known for his wisdom. So it hardly would be surprising if he could perceive the dangerous character of this maiden, especially as a book on physiognomy was also attributed to him.

one looks at points of correspondence and differences between Ibn Sīnā's and Ibn Hubal's versions, on one hand, and the rest of the Arabic authors, on the other hand, one can find their sources. Between Ibn Sīnā, Ibn Hubal and ar-Rāzī there are various points of correspondence. Ibn Sīnā follows ar-Rāzī in mentioning poison as the girl's diet without giving further clarification. He also follows ar-Rāzī who is the only Arabic authority to attribute to the girl's saliva a fatal effect.⁵⁵ In addition to this internal evidence, ar-Rāzī seems to be the only Arabic author who does not mention the Indians in his story nor does he attribute it to any authority. Ibn Sīnā then took the liberty to attribute it to Rufus.⁵⁶ Ibn Hubal, on the other hand, is known to be heavily influenced by Ibn Sīnā.⁵⁷ He mentions poison as the girl's diet, the dangerous effect of her saliva and sexual intercourse as a way of transmission.⁵⁸

⁵⁵ There is a small difference between what ar-Rāzī says and Ibn Sīnā. ar-Rāzī says that her saliva kills animals and chickens while flies do not approach her. She has also an effect on plants as they wither when she touches them. Ibn Sīnā says that her saliva kills animals while chickens do not approach her. There is no mention of any effect on plant or flies. This small difference could be due to the manuscript of ar-Rāzī which Ibn Sīnā used or to a hurried quotation.

⁵⁶ Herz, according to Thomasset, mentions that Ibn Sīnā quoted ar-Rāzī and attributed it to Rufus. Thomasset, Commentaire du Dialogue de Placides et Timéo, p. 91, f. n.97.

⁵⁷ Ullmann, Die Medizin im Islam, p. 162.

⁵⁸ Ibn Sīnā and Ibn Hubal share with almost all the Arabic authorities the belief that the sexual intercourse is a way of transmission. Ibn Hubal describes the girl's saliva killing as the mad dog's and the serpent's. In the section I have devoted to rabies in Chapter Two, the mad dog's saliva was considered venomous and a way of transmitting the disease. It seems that in Greek as well as in Arabic medical literature the harmful effects of something or somebody is either explained by humoral terms or by calling it a poison.

However he emphasizes the gradual increase in her poisonous diet, which is not mentioned by either ar-Rāzī or Ibn Sīnā, but could be found in Shanāq's and aṭ-Ṭabarī's works. That could mean that Ibn Hubal, though influenced by ibn Sina, might have consulted another Arabic source to add this piece of information or possibly added it himself. Moreover Ibn Hubal follows Ibn Sīnā in ascribing the story to Rufus. But why Rufus?

Rufus, as Ullmann has pointed out, was renowned among the Arabs for his book on poison and theriac and that would make him a very plausible authority for such a story.⁵⁹ Moreover, the Arabic tradition testifies to Rufus' knowledge of poisonous animals and how to treat their bites.⁶⁰ Perhaps Ibn Sina preferred a Greek source for such a piece of information. The Greeks in general had shown such an interest in poison as is apparent in the story of Mithridates, as well as in the works of Nicander of Colophon, Galen and others. However one cannot be sure if Ibn Sīnā wanted to fill a gap by mentioning a source for his information or perhaps he committed a non-deliberate error.

Thomasset, in an interesting study, has surveyed the appearance of this story in thirteenth century Latin writings and explained the significance of its popularity in the

⁵⁹ Ullmann, Die Medizin im Islam, p.322.

⁶⁰ Cf. al-Mubārak, K. al-Munqidh min al-halāk fi daʿ madār as-sam'im al-muhlika, Ms.Chester Beatty 3795, fol. 60 a 11, 83 a 2 ff., 84 a -1, 113 a 1, 113 b 11, 115 a 2, 116 b 10.

Medieval West.⁶¹ He has explained it as a reflection of the male' fear of women: of the first sexual encounter with women, of being infected with diseases while women themselves escape the fatal end. It also reflects the male's ignorance of female physiology and a human dream of immortality as well as a fear of being poisoned. Could all these explanations be applicable for the Medieval east ? I do not think so, for the following reasons: In most of the Arabic writings the story is not attributed to an Arabic tradition. It is either ascribed to a Greek authority such as Rufus or Aristotle or to an Indian or a Nabatean, while in Latin writings there is some re-working of the story which puts it in a western context. Moreover there is an unequivocal refusal to take this story seriously in Arabic. The Arabic translator of Shanaq's book said that he read it to the Caliph al-Ma'mūn who ordered it to be omitted from the book. Even Ibn Wahshiya declares his inability to comprehend this story and refuses to mention the diet. Arabic authors do not express any fear of women while the fear of contagion (in case of leprosy- using Thomasset's own example) was not as prominent in the east as it was in the west.⁶²

Why does it then appear in Arabic medical literature ? Most of the afore-mentioned Arabic writings are encyclopedias and they tend to register every thing relating to the subject. The deterrence from writing on wonder tales is not observed

⁶¹ Claude Thomasset, Commentaire du Dialogue de Placides et Timéo, pp.71-108. Cf.also Claude Thomasset and Danielle Jacquart, Sexuality and Medicine in the Middle Ages; translated by Matthew Adamson, Cambridge, 1988, pp.188-193.

⁶² Cf. Michael Dols, " The leper in Medieval Islamic society" in Speculum 58, 4 (1983), pp. 891-916.

because the line between scientific and non-scientific topics was not so great. Therefore the story of the poison maiden found its way into the Arabic medical literature.

Rufus and Miskawaih

In this part of this chapter I shall be giving a second example of how the Arabs received Rufus' teaching by looking at how Miskawaih (b. 932 - d. 1030 A.D.) ⁶³, the Arabic philosopher, interpreted Rufus' linkage of deep thinking with melancholy for the benefit of his topic in a small treatise of his entitled Fi an-Nafs w-al-'Aql. At first glance the appearance of Rufus' name in a philosophical text is interesting, especially as we know, through the surviving works and fragments, that Rufus did not display any philosophical interest, unlike the famous Galen. Moreover the Arabic biographers who listed his books did not attribute to him any philosophical work. Yet, Miskawaih, though a

⁶³ Abu 'Ali Ahmad Ibn Muḥammad Miskawaih was a philosopher, a historian, a poet, and a philologist. He studied chemistry and the " ancient sciences". He was involved in the political life of his time serving the Buyid dynasty. Arabic biographers attribute to him some works, most of which rank under moral philosophy such as Tahdhīb al-akhlāq and al-Fawz al-Asghar. There are also works in politics, history, poetry and medicine in Arabic. Some works in Persian are also attributed to him. While he exercised a wide influence in moral philosophy there are some doubts about the value of his contribution to other branches of philosophy and of his intellectual distinction. Cf. Mohammed Arkoun, Maqala fi an-Nafs w-al-'Aql in B.D.O., XVII, 1961-1962, p. 8; Abd ar-Rahman Badawi, K. Jawidan Hiram (al-Hikma al-Halida), Cairo, 1952, pp. 14-25. For some titles of his books whose topics are materia medica and diet see Fuat Sezgin, Geschichte des Arabischen Schrifttums, III, p. 336. See also Richard Walzer, Greek into Arabic: Essays on Islamic Philosophy, Oxford, 1962, p. 220, for his opinion on Miskawaih's contribution to moral philosophy.

Galen, O the p p & n that the best
Physician is a philosopher

philosopher, had studied medicine and it is not surprising to find him quoting a medical authority in his philosophical treatise. In other words, the relationship between philosophy and medicine is too ancient to consider its appearance in Miskawaih's text as a surprise.

FI an-Nafs w-al-ʿAql or On Soul and Reason discusses the nature of both soul and reason in relation to the roles of both sense and reason in acquiring such knowledge.⁶⁴ It is divided into ten questions and their answers. It is difficult to identify the character of the inquirer. Arkoun, the editor of the text, could find nothing in the text to prove that the inquirer is Abu Ḥayyan al-Tawḥidī, the inquirer of another work of Miskawaih called al-Hawamīl w- ash-Shawamīl.⁶⁵ In this treatise Miskawaih cites some sources, all of which are Greek. Those are Hippocrates, Plato, Aristotle, Galen, a commentator on Aristotle (Themistius), the Summaria (probably of Aristotle's works) and our physician Rufus.⁶⁶ The influence of the Platonic and Aristotelian philosophies is apparent

⁶⁴ The essential lines of this current treatise are also dealt with by Miskawaih in parts of his books Tahdhib al-akhlāq and al-Fawz al-Asghar. Arkoun, op.cit., p. 15.

⁶⁵ Arkoun suggests that the way Miskawaih addresses the inquirer as he reproaches him makes him appear a real person. Arkoun, op. cit., p. 12, f. n. 6. I agree with Arkoun that the inquirer is a real person. Yet I disagree with him in his claim that Miskawaih reproaches the inquirer. In fact Miskawaih, on two occasions, admits the inquirer's intellectual status. Cf. the Arabic text pp. 33, 41. For an edition of al-Hawamīl w-ash-Shawamīl see Ahmad Amin, Kitab al-Hawamīl w-ash-Shawamīl, Cairo, 1951.

⁶⁶ Arkoun studied Miskawaih's use of his sources in two works Tahdhib al-Akhlāq and Jawīdan Hīrad. Cf. Mohammed Arkoun, L'Humanisme Arabe au IVe / Xe siècle : Miskawaih, Philosophe et historien, deuxième édition revue, Paris 1982, pp. 131-160.

throughout the treatise where Miskawaih is trying to reconcile the two philosophies following the customs of his age.⁶⁷ What concerns us here in this part of this chapter is Miskawaih's interest in Rufus.

Rufus' name is mentioned in five questions (the first, the third, the fourth, the sixth and the tenth) out of the ten questions which constitute Miskawaih's treatise.

The inquirer attributes to Rufus in the first question the following statement: " None examines closely any science without it leading him to melancholy." Rufus declares here that there is a dangerous side-effect of mental activity which is the occurrence of the disease, melancholy. Such a link between the intellectual activity and melancholy has been expressed elsewhere in Rufus' fragments. As we have already seen, ar-Rāzī attributes to Rufus the idea that too much thinking and worrying leads to melancholy. Rufus also believes that good natured people are prone to melancholy because they move quickly and think a lot. In case no. III of Ki, the patient had melancholy because he persevered in studying geometry and he was accompanying the nobles.⁶⁸

The inquirer does not repeat Rufus' exact words in the last four questions where Rufus' name is mentioned. He is simply content with alluding to their general meaning. The

⁶⁷ Mohammed Arkoun, Maqala fi an-Nafs w-al-Aql, p. 13.

⁶⁸ ar-Rāzī, I, pp. 75, 77. Needless to say, Rufus was not the first one to draw a link between melancholy and outstanding mental activity. Pseudo-Aristotle had linked creativity with melancholy in a very different sense in his work Problems. For a good analysis of Aristotle's problem XXX, 1 see Klibansky, Saturn and Melancholy, 1964, pp. 15-41.

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inquirer uses Rufus statements to express his anxiety over the correctness of his beliefs. His anxiety springs from his understanding of the nature of both reason and sensation and their roles in acquiring knowledge. He inquires about the validity of relying on reason when the testimony of the senses is absent. The first question goes thus : How can we be safe from becoming melancholic if we believe in (awham)⁶⁹ imaginary things which have no particulars perceived by sense ? ⁷⁰ In

⁶⁹ This is a difficult term to translate into English. In the Arabic translations of Aristotle's Theology and Metaphysics wahm stands for the Greek word phantasia which means imagination. Later in Arabic philosophy as in Ibn Rushd the word Takhyul is used for phantasia. Cf. Richard Walzer, Greek into Arabic, p. 96. In Ibn Sina's philosophy wahm stands for, besides imagination, the estimative faculty as well as for the particular ideas deduced from sensibles by such faculty. Whether that later meaning was known to Aristotle is disputable. Cf. A.M. Goichon, s. v. wahm Lexique de la Langue philosophique d'Ibn Sina, Paris, 1938; idem, s.v. wahm Vocabulaires comparés d'Aristotele et d'Ibn Sina, Paris, 1939. In our text Arkoun, the editor of the text, did not comment on the meaning of this term. Yet, he referred the reader to the section in Aristotle' work De Anima where Aristotle differentiates between reason and imagination. It seems then that Arkoun understood the term to mean imagination in the Aristotelian sense of the word. The Aristotelian influence is very visible in the text. Moreover by studying the text it is clear that wahm in this text stands for imagination.

⁷⁰ The inquirer begins the first question thus: If no universal is known by reason, and no particular is known by sense without each of them (reason and sense) having to rely on the testimony of the other ; it follows that if one lacks a sense one lacks the ability to think correctly in universals as well as in particulars. How then can we be certain of proving something which lacks either of these, for it is one of them and does not have the evidence (testimony) of the other? He continues : it is said of Rufus the physician that he said no one thinks deeply in a science without it leading him to melancholy, so how can we be safe from being melancholic if we believe in (awham) where there are no particulars perceived by senses ? The inquirer goes on to talk about how erroneous both senses and imaginations (takhyul) and how reason takes from either of them through either remembrance or induction; in that case, how can we trust our belief in substances which we believe are spiritual if we do not perceive their particulars?

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the third question the inquirer asks about the correctness of his understanding of the nature of the soul. He asks : if we believe that soul is a light spiritual substance, of which we perceive neither a particular nor a universal, how can we be safe from what Rufus said and be sure that our belief is not a kind of (waswasa) hallucination with no truth in it ? In the fourth question the inquirer inquires about his understanding of the nature of reason. He says if we surmise (imagine) ⁷¹ that the reason in the microcosm ⁷² is a spiritual substance and that it is not identified with light, how can we be safe from what Rufus said ? He goes on to say that if the most honourable things which we have perceived and recognized, are the lights, by which we reach the perceptions, and the heat ⁷³ which is the cause of every action and reaction in the two worlds of microcosm and macrocosm, why do we not stop at them (light and heat), and not go beyond them, in order to ensure the confidence, certainty and insight that what we believe is not (waswasa) hallucination and that we have avoided what Rufus said ? The sixth question goes as follows: How can we assume (that there are) spiritual substances (soul and reason) other than these (light and heat) and that they are

tawakhamana

⁷¹ The inquirer uses the word tawakhamna which means " we imagined". Miskawaih rejects the use of this word in relation with reason.

⁷² In the third question the inquirer suggested defining reason as light which is something perceived by sense in order to be positive about our belief. Yet, Miskawaih refuted such a suggestion.

⁷³ In the second question the inquirer suggested the equation of soul with heat which is perceived by sense. Miskawaih rejected the suggestion.

superior to everything else (though) we do not perceive their particulars nor their universals ? What could be our excuse and how can we be sure that we have not fallen into what Rufus said and the fate that befell Galen and the wool-weaver and the like (Galen lost his imagination while the weaver thought that the carpet had sensation)⁷⁴ ? In the last question the inquirer makes this claim : if we believe in something which has no particular available nor universal and hence no demonstration based upon then as in the case of spiritual substances, we are in the position that Rufus said.

In brief the inquirer is concerned with the correctness of his understanding of the nature of both soul and reason. He considers believing in a substance which does not exist in the sensory world is illusion, hence it is melancholy. Melancholy in his mind is not only a psychic disease, but also a form of incorrect thinking, thinking which cannot be referred to a sensible particular.

Miskawaih responds to the questions the inquirer addresses to him by emphasizing that reason has its own nature and its own actions which do not all rely on sense. Reason is prior in existence to sense and is in fact a judge upon it. However our concern here is with Miskawaih's response to Rufus' linkage of thinking with melancholy. Miskawaih first refuses to accept that long or deep thought leads to melancholy. He says that, if one actually thinks, melancholy must be not only the name of the disease but also of every

⁷⁴ Miskawaih mentions Galen and the wool-weaver in the fourth question. It is not clear where Miskawaih obtained this story.

type of thinking : if not, and if one accepts Rufus, the correct ideas that issue from long thought are great diseases. He reminds the reader that the geometrician, army leader and politician's contributions come after long thinking and they are not considered illnesses. Miskawaih exclaims, how one can consider such contributions as illness while a man asks for a healthy body and takes care of it in order to have correct thinking which leads him to what is good and desirable in life and the hereafter ?

Moreover the difference between human and animal, Miskawaih points out, is in thinking and distinguishing, by which man hastens to commit all the good and avoids all the bad: he also distinguishes good from bad in affairs, beautiful from ugly in deeds, honest from lies in sayings, and true from false in beliefs. Having rejected Rufus' saying, Miskawaih then draws attention to the difference in perspective between the philosopher and the physician. The doctor is only concerned with bodily balance : if it is there, to keep it, and if it is lost, to restore it. He calls what is over and beyond the balance an illness. Miskawaih gives an example of occupational different perspectives : what the jewel-maker thinks as correct, the carpenter would at times deny.

Miskawaih, as we have read, has rejected the idea that melancholy is the sequel to deep thought on two grounds : first every contribution, including that of Rufus, which is but the result of deep thinking would be called an illness. Secondly, there is a difference in perspective between a philosopher and a physician. The last point means that what

the doctor would call melancholy the philosopher would not. This is, of course, an idea which Miskawaih would not like to canonize because it would mean his approval of the link between thinking and melancholy. Therefore Miskawaih feels the need to explain what Rufus could mean by his statement. Miskawaih claims that Rufus meant imaginary sciences and imagination in general: if one examines them closely they lead to melancholy. However there is a sharp distinction between reason and imagination : reason has nothing to do with imagination for the latter is subordinate to sense while reason is the judge of sense and prior to it in existence. By putting words into Rufus' mouth, Miskawaih has refused to link thinking with melancholy and instead interpreted what Rufus called thinking as imagination which is a philosophical term.

When Rufus' statement is alluded to by the inquirer in the third question (see above), Miskawaih answers in the following way. He reminds the inquirer that they have agreed that correct thinking, issued from sound reason, leads to the truth and acceptable opinion by which is known every thing that is comprehensible (conceivable). One does not require a witness from the senses, either particular or universal, in reason, but examples from the senses are given to those who are not completely trained in rationality, not as evidence but in order to clarify and train them thinking. Moreover there are things such as axioms and those which are close to them, and also (principles) of demonstration which do not need proofs from the senses. Besides, not every thing we learn is in need of a demonstration.

For the second time in this text, Miskawaih distinguishes between medicine and the other sciences. He claims that all the intellectual sciences, except those which are based on things in the natural world that go back to sensibles, have no need of any evidence from sense. Medical sciences belong to the intellectual sciences and hence they have nothing to do with melancholy.

Miskawaih defines melancholy as one of material mind (intellectus materialis) illnesses. It is a type of thinking that leads to its truth and its conclusion incorrectly. It is treated by correct thinking from sound reason (intellectus). The one who thinks in its causes then its therapy is neither melancholic nor hallucinating. In order to have correct thinking, one needs a sound machine, a specific temperament of a part of the head and balanced blood running through the arteries from the heart to the head with fine vapour, for these are the tools of thinking. If the blood in these arteries loses its balance and the fine vapour is disturbed, then a disturbance and shortage of the function of the soul's vis occur until it is treated and its balance is reformed. In this paragraph Miskawaih admits a corporeal cause for incorrect thinking : a disturbance in blood balance and its vapour. He does not raise the issue that excessive thinking could be the reason for such a corporeal disturbance. However his second explanation for the occurrence of incorrect thinking is borrowed from medicine, a discipline whose distinction from philosophy Miskawaih himself had indicated

earlier in the text.⁷⁵ Yet Miskawaih maintains that treatment is correct thinking coming from some one who has a sound reason. In his view, correct thinking can be learnt, while the incorrect is endless and in no way to be taught, but it should be treated from. Treatment also is obtained when the blood is treated of its imbalance and hence the function of the soul is retained.

To the other three questions where the allusion to Rufus is made by the inquirer Miskawaih briefly responds that he has given his answer earlier.

The relationship between philosophy and medicine has been visible in Miskawaih's text. Both the inquirer and Miskawaih, the philosopher, reflect a knowledge of medicine. The inquirer, as we have already read, quotes Rufus' statement and mentions Galen and some one whom he calls a wool-weaver to convey to Miskawaih his fear of melancholy. In the eighth question the inquirer asks about what Hippocrates meant by temperament or mixture in comparison with what Plato meant. Miskawaih, as it is clear from the text, makes a distinction between the philosopher and the physician in their perspectives on two occasions: in what concerns Rufus and also in this comparison between Plato and Hippocrates. On two more occasions Miskawaih reflects medical knowledge when he mentions the difference in taste between phlegmatics and

⁷⁵ Miskawaih's first explanation of the occurrence of melancholy is that if one examines closely the imaginary sciences and imagination one falls into melancholy.

bilious.⁷⁶ He does this also when he refutes the inquirer's claim that life is the heat in the human body by giving an example, one of many, from the doctor's classification of heat in many plants and minerals as first or second or third or fourth grade while they have neither soul nor life of their own.⁷⁷

Despite our ignorance of the true character of the inquirer, (whether he comes from the nobility or not) his medical knowledge especially of Rufus is significant. He quotes Rufus to express some fear of melancholy, which in fact indicates the dethroning of the Aristotelian link of genius with melancholy in philosophy. The inquirer did not look at melancholy as a gift given to the especially distinguished, as pseudo-Aristotle had declared in Problems. What is very interesting is that melancholy is identified in this treatise with hallucination or illusion, a total absence of reality i.e. as a psychic disorder. What Miskawaih does in his answers is highly significant. He tries to re-define what Rufus could have meant by thinking. Miskawaih thought that it was imagination, which is a philosophical term, but we have no evidence that Rufus meant it in his statement. He also used melancholy to mean a wrong belief.

Though there were Arabic works available at the time that Miskawaih was composing his treatise which announced the harmful influence of studying on health, such as Ishaq ibn Imran's book On Melancholy, Miskawaih chose Rufus to cite as

⁷⁶ Mohammed Arkoun, fi an-Nafs w-al-'aql, p. 60.

⁷⁷ Ibid., p. 51.

the authority on that topic. His choice of Rufus to quote is perhaps a reflection of his preference for going directly to the sources or perhaps for citing Greek authorities. Whether Miskawaih used a direct Arabic translation of Rufus' book On Melancholy or used a second-hand source is hard to prove from Miskawaih's silence and the brevity of his quotation.

It is difficult to take this treatise as a representative of Arabic philosophy's interest in melancholy or to take the inquirer's sentence as an age's concern with the effect of studying on the mind. Yet Rufus' appearance in a philosophical text, though it is unique to the best of my knowledge, is sufficient to indicate the Arabs' wider interest in him, which can be taken as an indicator of their recognition of his importance in that age.

Conclusion:

I have given two extreme examples of how the Arabs responded to Rufus' teaching: in the first, Ibn Sina and Ibn Hubal attributed to Rufus the wonder tale of the poison maiden as a reflection of some appreciation for Rufus' knowledge of poison and theriac. In the second example, Miskawaih, the Arabic philosopher employed Rufus' linkage of melancholy with studying to discuss his understanding of the nature of both soul and reason and the roles of both senses and reason in acquiring knowledge. In general, one can see that Arabic writers were interested in mentioning Rufus' name to give information in different topics such as materia medica and

therapy. They were also interested in Rufus to back up arguments as in the case of Qusṭā ibn Luqā's attack on those who claim that doctors approve homosexuality. He quotes Rufus' medical opinion that homosexuality is against nature and harmful to bodies.⁷⁸ Perhaps this example also shows how wide Rufus' teaching was. One finds that in some of these writings especially in ar-Rāzī and Ishāq Ibn 'Imrān, Rufus is commented upon, agreed and disagreed with. In all the cases where reasons for each judgement are given, they are based on clinical experience as well as on theoretical and scholarly study. We have already met Ibn Imran's defence of Rufus' mention of only one kind of melancholy, and his interpretation of Rufus' comments on the symptoms of the disease, and also of Rufus' recommendation of the use of a particular drug for patients with melancholy. In ar-Rāzī's case we have already seen him exclaiming that Galen did not mention that Rufus discussed only one kind of melancholy.⁷⁹ ar-Rāzī also notices that Rufus' recommendation of using entertainment for treating melancholy means only to have observed his patients.⁸⁰ He also comments on Rufus' saying that melancholy occurs in spring, pointing to the psychological influence of spring on people which leads to melancholy.⁸¹ Yet one should be aware that in most of the cases Rufus' knowledge was cited for gaining more information on the topic at issue and without any comments.

⁷⁸ Qusṭā ibn Luqā, *K. Ikhtilāf an-Nas*, p. 134.

⁷⁹ ar-Rāzī, I, p. 77.

⁸⁰ *Ibid.*, p. 80.

⁸¹ *Ibid.*, XV, p. 212.

The repetition of Rufus name in the Arabic works clearly reflects interest in his works as well as the esteem he and his works have attained. They also reflect the Arabs' interest in Greek learning specifically, and to some extent the interest nature of these writers in collecting the relevant information to their relevant subjects.

Conclusion

Conclusion

We have noticed in this study that Rufus of Ephesus was a Greek physician who did not say much about himself. In order to draw a picture of his personal life we have had to analyze his words and collect the bits and pieces from a variety of sources. Ancient and medieval reports are also of external help for they reflect their ages' appreciation for Rufus' learning. Rufus was living in the first century A.D. He should not be confused with Menius Rufus who wrote on pharmacology. Rufus of Ephesus probably learnt medicine in Alexandria and possibly in Asia Minor. He practised medicine in the eastern part of the Roman world : Egypt and Asia Minor. Yet, there is no evidence that he has been to Rome. He was a physician of who had mastered a wide range of specialities: anatomical terminology, pathology, therapy, pharmacology, gynecology, paediatrics, dietetics and Hippocratic exegesis. Unfortunately only seven works survive almost complete in their original language, Greek. However, plenty of Greek and Arabic fragments have survived to provide us with some resources to study Rufus' medical views.

Yet, the quantity of these fragments has raised a question about the exact number of Rufus' works. It seems that some of these fragments belong to separate works of Rufus while others are in fact parts of larger works which were later excerpted by Greek and Arabic writers. With the Renaissance interest in Classical antiquity some of Rufus' works were translated into Latin. The publication of such works marks the resumption of

Western Europe's interest in Rufus which was lost during the Middle Ages. Yet, the first modern edition of Rufus' works only came out in 1879 and was later followed by re-editions and translations of only a few of his works.

In this study I have focused on Rufus' explanation for the occurrence of diseases. His explanations are not always spelled out but hinted at in his exhortations for prevention and his recommendations for therapy. His interest in causation distances him from the Empiricists who believed that doctors should be concerned only with the external signs and there was no need to investigate any hidden causes. In this study I have traced seven factors which Rufus held responsible for illness. These are both external (air, water and various other external factors) and internal (humours, pathological anatomy, psychology and diet). Air played a part in the recognition of diseases, Rufus explained symptoms and prescribed treatment as a reflection of its role in both pulse and breathing. Vapours which are internally produced in the body can cause harm when their quality is affected and the head, which in normal circumstances receives them, does not reject them when they are morbid. Air can also cause illness when it arrives at one organ instead of another. As a constituent of climate it can also cause plague. Rufus maintained that air which is either internally produced or drawn from outside the body or as a constituent of climate had an influence on the human body, but this was no new idea. Yet it is not a reflection of Pneumatist influence but rather a Hippocratic one. The writers of Hippocratic Corpus recognized that climate had a harmful

influence and that air within the body might cause illness if it was improperly intercepted or accumulated.

Hippocrates' influence is also apparent on Rufus' belief in the responsibility of water for bringing about arthritis and lithiasis. The two authorities consider women less liable to lithiasis while children are more prone to it than adults. However, Rufus seems to be the first medical author to register a link between the occurrence of Guinea worm and drinking water. He is also one of the very few Greek doctors who encountered the disease. The information he gives about its prevalence among the Arabs in Egypt is significant. It helps in drawing a map of its spread through the ages and across two continents.

External factors are such things as the bites of mad dogs, the effect of sun and dust, and what might be called blows and falls. The belief in harmful influence of external factors on the human body is basically Hippocratic. Rufus, like many ancient authorities, believed that bites of mad dogs lead to rabies. As some of the hydrophobic symptoms corresponded with melancholy, Rufus considered hydrophobia a kind of melancholy and blamed the poison which had the character of black bile for its causation. Rufus' own contributions are his belief that rabies could be transmitted by sexual intercourse and that one ought to ask the patient whether the biting dog was mad or not, in order to diagnose accurately and treat better. Rufus seems to be the first surviving Greek writer to blame sun, dust and heat for the occurrence of ophthalmia and amblyopia. He also maintains that

blows can cause harm to the eye and can lead to arthritis and paralysis of the bladder. His understanding of paralysis as a loss of sensibility and motion is not surprising for he is one of our sources for recognizing the contributions of the Alexandrians' differentiation between the sensory and motionary nerves.

Despite Rufus' recognition of the harmful effect of some external factors on health, internal factors play a far larger and more influential part in exposing the human body to illness. Pathological anatomy is one of these internal factors. Rufus' interest in anatomy is clear from his surviving anatomical works and his knowledge of the contributions of the past, especially of the Alexandrians. Despite his lament over the loss of human dissection in his own age, there is some evidence for his contributions to anatomy. He mentions his own discovery of the course of the uterine tubes from the ovaries to the uterus which he had gained from dissecting a female sheep. He also tells of some Egyptian doctors who recently named some sutures of the skull. Rufus further employed his knowledge of the structure of the human body to explain the occurrence of diseases, help in diagnosis and favour particular therapeutic measures. Rufus preferred emetics to purgatives for those who have the orifice of the stomach more inclined upwards and narrower than the normal and for those who do not have a big orifice of the caecum either pathologically or non-pathologically. He explained amenorrhoea as the result of the presence of a congenital hymen. It is possible that this congenital hymen is

a virginal hymen, which means that Rufus meant late menarche and not amenorrhoea. However it is very much disputable whether the Greeks knew such a virginal hymen.

Rufus also explained the occurrence of amenorrhoea as the consequence of constant sadness, constant worry and similar mental states such as fear and anger. He seems to be the first Greek authority to link mental afflictions with amenorrhoea. Though he explained melancholy in humoral terms, he also linked them with grief, fear, worry, long studying, attending upon the nobles and asceticism. Rufus' causal linkage of thinking with melancholy has been noticed as reversing the happy relationship pseudo-Aristotle has maintained to be between the genius and melancholy. It seems that Rufus believed that melancholy was a destiny thinkers are bound to meet. Though Rufus had an interest in the influence of the soul on the body he did not discuss the exact relationship between them. His prime interest was to treat his patients without indulging in any philosophical discussion such we know of Galen. His use of psychological explanations of diseases is significant as it precedes Galen's and what is attributed to him of the six non-naturals. It puts him close to the Methodists who paid attention to the afflictions of the soul or mind.

For Rufus diet was a preventative as well as a therapeutic measure. Yet it could also endanger human health. Illness occurred when a man either abandoned exercises or over exercised. Quality and quantity of the food ingested influenced also health. On Rufus' view, when food contains

harmful kinds of food or when it is insufficient or too abundant, disease takes place. In general a man should be moderate in everything that relates to his body in order to remain healthy.

Yet the most important internal factor for Rufus was humours and qualities. These two are, according to Rufus, the constituents of the human body. Humours cause illness when out of balance or in a morbid state. Temperaments also cause illness when out of balance without generating any morbid humour. Humours cause a variety of diseases. Humours are linked with the other internal factors. They can be influenced by mental afflictions and so two diseases : melancholy and amenorrhoea could occur. Pathological anatomy can influence humours when it obstructs the letting out of blood which is one of the humours in menstruation. Humours are tightly linked with diet as being the product of food. Even with external factors we have already seen Rufus interpreting the poison of the mad dogs as imitating black bile in its influence on the soul. This indicates that humours are the most influential cause of illness in Rufus' system of causation.

Rufus' reliance on humours and qualities ties him closely with the Hippocratics or the Dogmatists. Yet these ties seem incompatible with his concern, which he expresses on several occasions, to be understood as disagreeing with Hippocrates. Though Rufus does not name any of those who might be accusing him of such a disagreement, his attitudes perhaps reflects one of the rare occasions when Rufus comments on his contemporaries. One of the clearest examples of such a fear

and such a particular relationship is in his work Medical Questions. In that work Rufus announces that interrogating the patient, or one of his relatives if something hinders the communication with the patient, is the best way to achieve a more precise diagnosis and a better therapy. Rufus ends this treatise with encouraging the doctor arriving at a new city to interrogate the natives about its particulars. He announces his disagreement with those who accuse him of disagreeing with Hippocrates who wrote Airs, Waters, and Places to be a help for doctors in orientating themselves with the particulars of a city at which they have newly arrived. Rufus' defence is, as Wesley Smith has argued, a reflection of a Hippocratic tyranny. By advocating interrogations Rufus seems to cast some doubt about the absolute authority of medical manuals and the capacity of the doctors to learn by themselves without external help. Perhaps the horizons of the Hellenistic and the Roman worlds which are wider than the Hippocratic have made Rufus argue for the need to go beyond Hippocrates' Airs, Waters, and Places. It seems that Rufus, while concentrating on diagnosis, paid prognosis less attention. Rufus appears to be, in Medical Questions, uninterested in the social value of prognosis as interpreted by Edelstein in a celebrated essay. Rufus' writings in general are exempt from an interest in attracting clients and winning opponents, which, according to Edelstein, are among the goals of the Hippocratic prognosis. Perhaps another reason for paying prognosis less attention is that Rufus, though he knew of critical days, did not concentrate much on their importance.

Interrogating the patients or their relatives is one of Rufus' method of recognizing the disease. He uses also his observation and palpation. The importance of a precise knowledge of the patient's case is highlighted by achieving a better therapy. Judging from the surviving materials, therapy was viewed as one of Rufus' most important specialities. Rufus links therapy with both causes and symptoms. His therapy aims at eliminating both the hidden causes and the apparent symptoms. It takes into account the kind of disease, the part affected and the patient's particular case. Therapy consists of drugs or pharmacology, diet and surgery. Rufus' drugs proves his wide knowledge of materia medica. Unfortunately Rufus' botanical works have not survived except for a few fragments. However Rufus' De Podagra and some Greek and Arabic fragments contain some recipes, one of which is known as hiera Rufi. This recipe is a purgative and it was very much celebrated in the Middle Ages among the Arabs. I have argued against Rufus' authorship of such a drug. The fragmentary nature of the materials has led to a false attribution of this drug to Rufus. The Arabs' indirect access to some of Rufus' works helped to perpetuate such a mistake of authorship. As for surgery, Rufus has used external therapeutic measures such as bleeding, cupping and cataplasms. Yet he had a negative attitude towards surgical operations as he himself declared that the doctor should not seek voluntarily extreme measures unless in emergencies. His attitude, as he himself has put it, marks him off from Hippocrates. Yet his interest in eliminating as well as rectifying the morbid humours as well

as his belief in the therapeutic and preventative roles of diet are Hippocratic. However Rufus' mentioning of diet after both drugs and surgery, in his accounts of lithiasis, gives the impression that he believed that diet could be a complementary measure, to be followed in convalescence. On the other hand, his indication, in melancholy and jaundice, that diet can by itself heal reflects an understanding that diet could be an alternative to drugs and surgery. Yet, we have noticed an overlap between Rufus' practice and that of Soranus the Methodist. This overlap suggests, besides the limitedness of the available therapeutic measures, Rufus' own eclectic tendencies.

The Arabs' special interest in Rufus is a reason for the number of Rufus' Arabic fragments. The Arabic biographers' lists of Rufus' works are additional evidence of unknown works of Rufus. One of Rufus' interesting works which survive only in Arabic fragments is his work To the Laymen. This work reflects Rufus' interest in educating the non-specialists. We have already met Rufus' interest in laymen in his work Medical Questions in which he recommends asking a doctor, and, if this is not possible, a layman. Medical Questions and On the Naming of the parts of the human body testify, as modern scholars have noticed, to Rufus' interest in educating perhaps the would-be specialists. Rufus was translated into Arabic in the ninth century. Qusta Ibn Luqa was one of his translators. The Arabs' knowledge of him was both direct and indirect. They quoted Rufus with and without acknowledgement. Their appreciation of his pharmacological knowledge has led to the

attribution to Rufus the story of the poison maiden, who kills anybody and everything that approaches her. A further example of their particular interest comes from Miskawaih, the tenth century Arabic philosopher-historian, who wrote a treatise On the Soul and Reason. In this treatise Miskawaih discussed the validity of the knowledge which is obtained with senses and without the support of reason. He uses Rufus' statement on the linkage between thinking and melancholy to limit the meaning of thinking to that which follows the senses alone. Yet one should not exaggerate the Arabs' response to Rufus' learning for they used Rufus in most cases to gain information without making any comment on his views and perhaps only to show off their knowledge of the Greek learning. However their interest in Rufus means an appreciation of his knowledge as well as of the Greek knowledge in general.

I have tried here to give a general overview of Rufus' date, life, possible places of learning and practice. As a Greek doctor whose works survived in three languages, it has been quite important to discuss these works and the nature of the transmission especially to the Arabic. Rufus appears at the end as a Hippocratic with wider interests than the rest of the dogmatists. He has some eclectic tendencies in leaning on psychology in the explanation and treatment of illnesses. But it is wrong to call him a dogmatist without adding the word eclectic. It is interesting to note that ancient authorities never attributed Rufus to a particular school, nor did Rufus himself mention his school. Rufus' importance lies in the

various specialities he possessed and above all in his practice which won him a special place among the Arabs. His awareness of the importance of anatomical terms is highly significant. Studying his works is worthwhile for, though being one of the very few people who won Galen's respect, he was with the rest eclipsed by Galen's fame. Yet he can add to our knowledge of an age of which we otherwise possess little direct knowledge.

I should conclude this study with pointing at some of the difficulties I have experienced concerning the sources. This study has clearly shown that in order to read Rufus and form a general picture of his views one has to read him in Greek (Rufus' complete works and a considerable number of fragments in Oribasius, Aetius and Paul), Latin (a medieval version of Rufus' work On Joint diseases as well as a very small number of fragments taken from Medieval works) and Arabic (two putative works and a great number of fragments). The diversity of materials and its fragmentary nature have made the task of recognizing the characteristics of Rufus' style of writing difficult and consequently made authenticating these fragments a hazardous job. To clarify matters I should like to take Greek fragment no. 117, which I have studied in the section on lithiasis in Chapter Two, as an example. In that fragment Rufus appears to use an Aristotelian expression which is not known of him elsewhere. The language itself could belong to Paul, the excerptor of the fragment. What makes things more difficult is that the quantity of the fragments, both Greek

and Arabic, surpass the number of Rufus' authentic Greek complete works. Authenticating such fragments where the excerptor declares in its beginning that he has used more than one source is extremely difficult. In the section on rabies in Chapter Two and also in the section on Hiera Rufi in chapter Five we have met such difficult fragments.

Arabic fragments are no better. In some of them, especially in those which are taken from ar-Rāzī's book al-Hāwī, which is our major source for Rufus' Arabic fragments, there is a great difficulty in distinguishing what belongs to Rufus from what belongs to others. That ar-Rāzī's book represents his own private notes and that he died before publishing his text create still further difficulties. Perhaps ar-Rāzī's students, who collected and edited his notes after his death, inserted the words " he said" without clarifying the identity of the speaker. For instance I have experienced some confusion in disentangling what belongs to Rufus from that of Paul in what concerns arthritis (ar-Rāzī, al-Hāwī, XI, p. 133). Another difficulty is the language of these Arabic fragments. When the Arabic is elegant as in some parts of the so-called Krankenjournal (Kj. III, 6), it seems hard to believe that the work is a translation and not an original Arabic work. Ancient and medieval medicine's shared emphasis on humours does not help as an external aid in such problems.

Authenticity and identifying Rufus' language are not the only problems. Having started working on my thesis I have been faced with a difficulty peculiar to the Arabic materials. While there are more than one modern critical edition of most

of the Greek texts which can give the reader the opportunity to choose between the various readings of the manuscripts, this is not the case with the Arabic texts. Many of the Arabic texts survive only in manuscript and have not been subjected to critical editions. These manuscripts vary in quality and content and they are scattered in different parts of the world, which makes the choice of using a particular one is crucial. When I started collecting materials it seemed appropriate to use the Bodleian Library's manuscript of Ibn al-Jazzār's Zād al-Musafir. However I found out that this manuscript is not complete and that Dugat recommends Dresden manuscript. That meant that I had to request a microfilm of this manuscript from Dresden. Later I learnt that the first three books of ibn al-Jazzār's Zād had been edited in Tunisia, yet my efforts to obtain this edition for the last two years have failed. Unfortunately the microfilm of Dresden manuscript was stolen at a late stage in the preparation of this thesis. Moreover the edited Arabic works have their own problems. The Haydarabad edition of ar-Rāzī's al-Hāwī, despite its usefulness, has many errors of its own. The editor of the text on some occasions preferred wrong readings which distort the meaning of the text as in the case of Galen and his opinion on the influence of food on having arthritis. In a fragment ar-Rāzī attributes to Galen the theory that worry (care) harms sufferers from gout (ar-Rāzī, XI, p.109). Fortunately the critical apparatus of al-Hāwī as well as the original Greek of Galen's passage show the mistake of the editor of the Arabic text. Galen has in fact said that gluttony can harm patients

with gout. The editor of the Arabic text has preferred a wrong reading for the text and turned the word from gluttony to worry. On another occasion the editor gives a correct reading of the Arabic manuscript yet when the same quotation appears later in the same text with an error, he does not emend it (ar-Rāzī, I, pp. 212, 215). Other editors, on the other hand, have not resolved the problems of non-Arabic proper names, place names and materia medica. They have been content with giving the transliteration forms without correcting them or indicating their Greek origin. The editor of al-Baladī's book Tadbīr al-Habalā is a good example. Other Arabic texts are not critically edited. In other words the editor of the text has chosen in most of the cases a single manuscript to copy, sometimes without even correcting grammatical errors or trying to find reasonable readings. This emphasize the need to have critical editions of those Arabic texts which should be based on collections of all available manuscripts which are scattered in different parts of the world. What we also need is a better Greek-English lexicon for materia medica than Liddell and Scott's Greek-English lexicon. The only available alternative is using the interpretations of modern European editions of these Greek texts, for instance that of Dioscorides. Yet this is not always the solution for, if the available modern translation is German as in the case of Dietrich's edition of Dioscorides, the translator finds it difficult to find an exact English word for the German which in itself is a translation. The Arabic fares no better than its Greek predecessor for we do not have dictionaries for

materia medica except for Ahmad Isa's, and also the modern editions of some of the Arabic pharmaceutical works such as the edition of al-Birunī's book and that of Maimonides'. We need a better dictionary, a task which should be carried out by specialists.

Despite all these difficulties in dealing with these different sources, their availability has made the work on Rufus exciting and stimulating. If one thinks that the only available reference for Rufus' toxicology is the Arabic fragments, one can understand the value of such under-used resources. This suggests how one can further the studies on other ancient authors such as Philagrius by using the Arabic materials to fill in the gaps in our sources. It can also provide more insight into the nature of the movement of translation from Greek into Arabic and from Arabic into Latin.

Appendix

Arabic authors who mention Rufus, in chronological order

- 1) Sabūr Ibn Sahl (d. 869). K. alAgrabadhīn al-Kabīr.
- 2) (Pseudo) Abu l-Ḥasan Thābit ibn Qurra (b. 834-d. 901). K. adh-Dhākhira fi 'ilm at-tibb.
- 3) Qusṭā Ibn Luqā (b. 820-d.912). K. fī-l-bah; K. fī-l-bah wa-ma yuḥtaju ilaihi min Tadbīr al-badan fi sti'malihi; K. Ikhtilāf an-Nas.
- 4) Ar-Rāzī (b. 865-d.923). K. Al-Hāwī fi at-tibb.
- 5) Ishāq Ibn 'Imrān (early 10 th.c.). Maqala fi-l-malinkhuliya.
- 6) Ya'qūb al-Kashkarī (10 th c.). Kunāsh fi at-tibb.
- 7) Ishāq Ibn Sulayman al-Isrā'ili (d. ca. 935 A.D.). Kitāb al-aqhdhiya.
- 8) Al-Masū'dī (d.345/956). K. at-Tanbih wa al-Ishrāf.
- 9) al-Qumrī (fl. 960-980). Kunāsh al-Ghinā wa-l-Munā.
- 10) Al-Baladī (d. 990). K. Tadbīr al-Ḥabalā wa-l-atfāl.
- 11) Ibn an-Nadīm (wr. 987). K. Al-Fihrist.
- 12) Ibn al-Jazzār (d. 1004). K. Zād al-Musāfir wa qūt al-Ḥadir; K. al-Ītimād fi l-adwiya al-mufrada; K. Siyasāt as-Subyān wa tadbirihim.
- 13) (Pseudo) Abu l-Q. Maslama b. A. al-Majritī al-Qurṭubī (d. 395/1004 or 398/1007). K. Ghayāt al-ḥakim.
- 14) ar-Raḡīq an Nadīm (d. 1026). K. Ouṭb as-surūr fi ausāf al-khumūr.
- 15) Miskawaih (d. 1030). Maqala fi-l-Nafs wa-l-'Aql.
- 16) Ibn Sīnā (b. 980-d.1037). K. Al-Qanūn fi l-Tibb.
- 17) Al-Mubashshir Ibn Fatīk (writing 1049). K. Mukhtār al-

Hikam wa-mahāsin al-kalim.

- 18) Al-Mubārak (writing 488/1095). K. al-Munqidh min al-halāk fi daf' maddār as-samā'im al-muhlika.
- 19) 'Alī b. Riḍwān (998-1067). Risāl.h fi daf' maḍār al-abdan bi-ard Misr.
- 20) Sharaf az-Zamān Tahīr al-Marwazī (beginning of the twelfth century). K. Ṭabā'i' al-Ḥayawān.
- 21) Ibn al-Maṭrān (d. 1191). K. Bustān al-aṭibba wa-raudat al-alibbā.
- 22) Abu l-Makārim Hibat Allah ibn Jumal' al-Isrā'ili (d. 594/1198). Kitāb al-Irshād li-maṣālih al-anfus wa-l-ajsād.
- 23) Ibn Hubal (b.515/1112-d.610/1213). K. al-Mukhtarat fī ṭ-tibb.
- 24) Abu l-Fadl Dawūd Ibn abi l-Bayān al-Isrā'ili. (b. 1161-d.1240). K. ad-Dustūr al-bimaristanī.
- 25) 'Abd al-Latīf al-Baghdadī (b.557/1162-d. 629/1231). (fi) l-Maraḍ al-musammā diyabita.
- 26) Ibn al-Baiṭār (d. 1248). K. Al-Jami' li Mufradāt al-adwiya wa la-aghdiya.
- 27) Ibn al-Qiftī (d.1248). K. Tārikh al-ḥukama.
- 28) Ash-Shahrazūrī (13 c. A.D). K. Raudat al-afrāh wa nuzhat al-arwāh.
- 29) Al-Burqumānī (mid of the 13 c.). al-Maḡāla al-Muḥsinya fī hifz as-sihha al-Badaniya.
- 30) Ibn abi Uṣaibi' a (d. 1270). 'Uyūn al-nbā' fi tabaqāt at-ṭiba'.
- 31) Ibn al-Ḥibrī (d.1286). K. Mukhtasar tārikh ad-duwal.

- 32) Ash-Shirāzī (d. 1330). K. al-Hāwī fi 'ilm at-tadawī.
- 33) An-Nuwairī (d. 1332). K. Nihayāt al-arab fi funūn al-adab.
- 34) Al-'Abas b. 'Alī b. Rasūl ar-Rasūlī (14 th.). al-lum'a al-Kafiya fi-l-adwiya ash-shafiya.
- 35) Al-Ghuzūlī (d.1412). K. Maṭalī' al-Budūr fī manāzil as-surūr.¹
- 36) Muḥammad ibn Bahā' ad-Dīn ash-Shirazī (d. 1467). Fawā'id al-ḥusainya fi al-mujarrabāt al-Ṭibbya.
- 37) Al-Anṭākī (d. 1599). K. Tadhkirat uli al-albāb.
- 38) Hajji Khalifa (1609-1657). Kashf az-zunūn 'an asamī al-Kutub wa-l-funūn.

¹ I could not find the quotations Manfred Ullmann attributes to al-Ghazuli, though I used the same edition of al-Ghuzuli's work Ullmann mentions.

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