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T H E S I S

on

N E U R A S T H E N I A

for the degree

of

D O C T O R O F M E D I C I N E

of the

UNIVERSITY OF EDINBURGH

by

H U G H M O R E T O N R O B E R T S

( M.B., Ch.B.,Edin.,1901).

April 1905.



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## CHAPTER 1.

### History and Nature of Neurasthenia .

Neurasthenia, (Greek, Neuron, nerve, and astheneia weakness) is a condition of weakness and exhaustion of the nervous system, giving rise to a varying degree of irritability, and characterised by various symptoms.

Although Neurasthenia must still be placed among the so-called functional disorders of the nervous system, its extreme and possibly increasing prevalence in our midst has brought it to the front, and slow as the medical world was to accept the term Neurasthenia upon its introduction as representing a condition distinct in itself, believing, as many did that it was a name given to an indefinite group of symptoms, having no relation to each other, it is now generally recognised as a definite and consistent malady.

To George M . Beard of New York is due the credit of having first introduced the term Neurasthenia in 1868 when he read his first paper on this subject before the New York Medical Journal Association which was subsequently published in the " Boston Medical and Surgical

Journal<sup>(1)</sup> " and afterwards appeared in *Beard's* and *Rockwells* "electricity".

Although many hold that the term does not adequately express all that the condition presents; it is undoubtedly the best, because the most significant, weakness is the chief characteristic of Neurasthenia, weakness in all its forms and conditions and with all its *consequences.*

It is however, impossible to agree with *Beard* when he claims to have <sup>been</sup> the first to discover this condition, and when he maintains that Neurasthenia is a modern and especially an American disease scarcely known in Europe and not at all in some European countries, as Germany, Russia, Italy and Spain. This is by no means the case, Neurasthenia is certainly not confined to America, nor is it, in any sense, a modern malady.

It is true, for many reasons, that the condition is more prevalent now than it was 60 years ago; ~~and~~ <sup>the</sup> demands of modern civilisation help materially to swell the roll of its victims; it is more readily recognised now than it was, and treatment, helpful to its cure, is resorted to, whereas, formerly, it was allowed to pass un-noticed, or looked upon as incurable; and further it has been neglected and un-noticed owing to the subjective nature of its symptoms, and the almost entire absence of objective phenomena.

The condition as such, however, existed thousands of years ago in the old world, and morbid conditions, which must be referred to this disease, are found even in the writings of Hippocrates who in his work, "De

Morbis" expresses himself thus: "Those who are suffering from this malady cannot live without eating, nor can they tolerate the nourishment they take; their entrails make noises and the cavity of the stomach gives them pain. They vomit sometimes a kind of *humour*, sometimes other matters. They bring up bile, *saliva*, phlegm, and acrid matter, and after vomiting they appear to be better. But when they take food they are troubled *with* risings and belchings, they get a headache, they suffer from stinging all over, sometimes in one part, sometimes in another, as though they were pricked with needles." This description, though crude, leads one to think that Neurasthenia related to gastric disorder existed at the time of Hippocrates as well as at the present day.

From this remote time, then, down to the present day we find endeavours in medical literature to describe under various *titles*, conditions allied to Neurasthenia.

The following terms, among others, have at different times and periods been applied to it: - 'Cachexie', 'Affections Vapoureuses', 'Diathese', *nerveuse*, 'Etat nerveux', 'Neuropathie'.

In the sixteenth century Jean Fernel and other French authors described a condition closely allied to what we now term Neurasthenia. In the seventeenth century among others Thomas Willis and Sydenham did the same, in the eighteenth, towards the close, Robert Whytt and Erasmus Darwin observed it, although they confused it with other neuropathic states. Whytt in



1765, divided such disorders into Nervousness, Hysteria and Hypochondriasis. These were followed at the commencement of the last century by F. W. Jaeger and others. About this time it was frequently known as neuropathic diathesis or constitution, In 1840 Brachet described it as nevrosasme, and a few years later Cérise termed it névropathie protéiforme. In 1860 Bouchut cleared it up considerably, and published his treatise, "Du nervosisme et des maladies névrosées" and it was from this time called by the indefinite name of nervosismus until 1868, when Geo M. Beard published his treatise aforementioned, and gave the condition the title of Neurasthenia, which has been retained ever since.

While granting, therefore, to Bouchut and Beard, particularly the latter, due credit for having limited the condition within its true confines, and for having mentioned symptoms which had hitherto escaped notice, or at least, which had not been mentioned in relation to the disease, and for having bestowed upon the condition an appropriate title. We must at the same time, recognise the writings of many others, some already mentioned, and others, who, in describing other diseases and conditions, gave very characteristic descriptions of this disease, among them being Brown<sup>(2)</sup>, in his article on "Spinal Irritation", also Teale<sup>(3)</sup>, Marshall<sup>(4)</sup>, Hirsch<sup>(5)</sup>, Griesinger<sup>(6)</sup>, Wunderlich<sup>(7)</sup>, Hasse<sup>(8)</sup>, and several others.

Since the publications of Beard's writings, others have contributed valuable articles on the condition

notably Charcot<sup>(9)</sup>, Ziemssen,<sup>(10)</sup> Bouveret<sup>(11)</sup>, and F. Müller,<sup>(12)</sup> all of whom have retained the title given by Beard to the disease.

While congratulating ourselves on the fact that Neurasthenia has at least been recognised as a separate disease and been differentiated from conditions such as Hysteria and Hypochondriasis, with which it was formerly confounded, we run the risk of being too dogmatic; for, while in most cases it is possible to thus distinguish, there are many cases of Neurasthenia ~~xxxxHxxxxx~~ which cannot be distinguished from other diseases such as Hysteria and Hypochondriasis. The two conditions, Neurasthenia and Hysteria, are often associated, and many cases are described as Neurasthenia which, however, are as truly Hysterical. Although the majority of cases of Hysteria are Neurasthenic, a person suffering from Neurasthenia is not necessarily by any means, the subject of Hysteria.

Neurasthenia is a neurosis, having as far as our present knowledge takes us, no definite organic lesion; that there must be some changes in the nervous centres, or elsewhere, is acknowledged, yet these changes are too fine to be detected by our present methods of examination. The possible morbid anatomy of Neurasthenia must, however, be discussed later; its symptoms in many cases are indistinct and variable and chiefly subjective; the borderland between it and other diseases is vague and more or less unknown; acce

According to some it is sometimes the precursor of more fully developed conditions. "It is the soil" as Avard<sup>(3)</sup> says, "from which they take root and from which they grow." This statement, however, is contradicted by many, notably by Beard, yet we meet with other cases which are distinct in themselves, and separable from all other diseases.

Not only do the symptoms caused by the disease vary as they affect the various systems and organs of the body, but also the cause of Neurasthenia; thus many cases inherit, as it were, a predisposition to Neurasthenia, whilst other cases are truly Neurasthenic and are brought about by trauma. In this way, it will be readily recognised, that we get many different forms of Neurasthenia, presenting themselves to us, and yet, different as the symptoms may be in the respective cases and varied as the causes<sup>are</sup> of this condition, there are certain cardinal relations and analogies met with in all cases, which claim for it the right to be recognised as a distinct disease, separate from all other allied conditions of the nervous system.

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## CHAPTER II.

### Illustrative Cases.

The following cases <sup>which</sup> will help to illustrate many points in the text, have been chosen out of a considerable number of cases that have come under my observation and care, not because <sup>they are all,</sup> by any means, typical cases of Neurasthenia but rather because they help to show some of the various types or forms of neurasthenia that one meets with. The cause of the illness differs more or less in each case, and although most of them present certain symptoms generally met with in all cases of Neurasthenia, a few also show symptoms, which although consistent with the diagnosis of Neurasthenia, yet are not often met with. The treatment although in most instances it runs along somewhat similar lines, was varied as the individual case demanded.

CASE The first case is that of a man S.D. aged 41. about 48, a solicitor, well built, and apparently in good health. He had been troubled with ex-

treme nervousness for the past six years. At this time (six years ago) he bur~~ied~~ his only son, and this preyed very much on his mind at the time, with the result, as he says, that he has never been the same man since. He at last lost all confidence in himself, and although he still attended the courts carrying on his profession, he felt extremely nervous. The first symptom\* he noticed was a certain weakness in his legs, he was unable without aid to climb the stairs leading to his office, and, reaching there was quite unable to concentrate his attention on his work. In time he complained of severe backaches and slept badly at night\* , often lying awake for hours. His appetite afterwards became poor, and he suffered from flatulence and pain after eating. Constipation troubled him seriously, although he had occasional attacks of diarrhoea. He had noticed a sediment in his urine, which on examination was found to contain phosphates, the urine otherwise being normal. He had had, he said, while following his occupation several bottles of medicine, which had no effect, although the feeling of weakness in the limbs had disappeared to a great extent.

He was persuaded to relinquish for a time the greater part of his duties, and took regular exercise and his diet and <sup>general</sup> ~~regular~~ habits were regulated. He also took a cold sponge bath every morning and rested after each meal, especially after breakfast, After a stay of some weeks in the country he began to recover, and was able

to attend to his customary duties again. He lost after a time all feeling of nervousness.

He assured me that he had never been troubled with gastric disorders previous to the onset of the neurasthenic symptoms.

The second case is that of a woman, A.J., aged 55 years, a spinster, She came of a decidedly nervous CASE family. Her father was extremely neurotic, 2 . and her brother committed suicide. This fact was unknown to her. She herself had suffered when a child, from St Vitus' Dance, and had always been nervous. At times she seemed to have paroxysms or nerve-storms. During these attacks she is apparently in great distress, and says she hears noises in her ears, a buzzing sound which is aggravated if there is any talking going on in the room; a draught, or a door slamming will aggravate it. During these attacks she feels her head being pressed, as if in a vice and will sit for hours in a darkened room, as she is very sensitive to light, and she frequently declares she is dying. In a few hours the paroxysm will pass off and leave her much exhausted for a day or two. Her appetite is poor, she cannot take her food and never feels the want of it. When out of doors she is extremely nervous and will never venture out alone. Although accustomed to attend church, she dreads the idea of going lest she should be ill, and always sits near the door so that she may go out should she so desire. She is naturally of a cheerful disposition but is extremely depressed

during the attacks.

Her heart is apparently normal and nothing can be found amiss in any organ of the body upon examination. Drugs do not seem to have much effect, Ammonium Bromide, Grains 5, thrice daily seem to have ~~the~~<sup>the</sup> most beneficial affect upon her, but in spite of any attempt at treatment, she is still subject to these attacks.

CASE The next case is one of a woman, Mrs F., aged 3. 45, who has reached the *meno*-pause. The *menses* although still present, are becoming scanty. She complains of pains in the stomach, flatulence, ~~and~~ feeling very ill, unable to get up and attend to her duties. She has been attended by one or two medicalmen, one of whom took a serious view of the case, suspecting as he told me Malignant Disease of the Liver. She complained much of head~~a~~che, and is emaciated, and troubled with constipation. There was slight jaundice and a small quantity of bile in the urine. Upon examination nothing could be made out *in* the stomach. She had been taking a mixture of Bismuth and Soda but it apparently did her no good. Some time afterwards she volunteered the statement that she had not had a night's sleep for weeks, and what sleep she had ~~had~~ was broken by frightful dreams. She was put upon Potassium Bromide, grains 10, every 4 hours, and after a time felt much better. The dose was increased to grains 15, this time Ammonium Bromide being given. She soon came to feel much better after having some sleep and began to put



on flesh rapidly. In a few weeks she felt, as she said, a different woman. The constipation was relieved with suitable remedies and her diet attended to. She was soon able to attend to her household duties.

CASE The following case, which I had the opportunity  
4. of observing, is that of a medical practitioner A.B., aged 41. He complained of extreme nervousness which rendered him unable to attend to his practice. This had, he said, come on after an attack of influenza which he had two years ago. There was nothing worthy of note in his family history, or his personal history previous to this attack of influenza. He complained chiefly of headache, a feeling of fullness at the top of his head, and also pain down the middle of his back. This was specially experienced first thing in the morning and gradually got better during the day, only to be repeated the following morning. He also complained of great muscular weakness, the slightest muscular effort seeming to exhaust him. He had, he said, lost confidence in himself and the least thing going wrong in his practice worried him. He slept badly at night, and rose in the morning feeling as tired, if not more so than on going to bed. He felt quite limp. He had tried several drugs but in vain, and was eventually persuaded to relinquish his practice for a time, and went away for three months to the country where he had plenty of rest, suitable and regular diet and a course of massage. Under this careful régime he gradually improved and was in time able to take up his pro-

professional duties again.

CASE The next case is one of a minister, J.R., aged 5. 35, came complaining chiefly that he was unable to fix his attention on his studies, his mind wandered, He had a large church and his duties seemed to be getting too much for him. He complained of a pain above the eyes over the frontal region and of feeling tired, "done up", as he said. He was unable to think anything like as clearly as he had done; nor could he read for any length of time without the print becoming blurred. He gradually became worse, and began to dread that there was *something* very serious the matter with him. When he went to the pulpit, he felt extremely nervous and finally had to give up preaching. He could not account for all this otherwise than that he had been working very hard in connection with his church duties. He was persuaded to try the "Weir Mitchell" method of treatment and obtained six months leave from his church. For the first three months—the first of which he spent in bed—he did not hear anything concerning his church. After a time he commenced to improve rapidly and then took a sea voyage and returned at the end of his leave feeling quite fit to take up his duties afresh.

CASE The sixth case is that of a married woman, Mrs 6. L, aged 40, who has suffered for many years from dyspepsia. She came complaining of extreme nerv-

ousness which she said had come on only during the past few months and seemed to be getting worse, unfitting her for work. Upon enquiring into her history I found that, to use her own expression, "She had been a martyr to indigestion for years" and had suffered from heartburn, flatulence and constipation. When she had suffered in this way for some years, she began to be troubled with severe headaches—a dull pain almost constantly present over the occiput—loss of appetite, and in time insomnia, followed by the extreme and increasing nervousness of which she chiefly complained. She had an anxious <sup>expression,</sup> her features were drawn as though she had suffered severely, and she started at the slightest sound. At first I prescribed for her ordinary mixtures for Gastric Catarrh, such as Bismuth, Soda, Pepsin, etc., also minute doses of Calomel at intervals of a few days, and regulated her diet for her, forbidding altogether the use of Alcohol and Tea. Later she had Ammonium Bromide, grains 10, three times daily, and was ordered to rest for some time during the day. Although her recovery was slow, she improved in health considerably. As the dyspepsia was relieved, the nervousness and other neurasthenic symptoms, disappeared gradually, and she has with the exception of occasional relapses recovered to a great extent her health, the relapses being due to some indiscretion in diet.

CASE The next case is that of a woman, Mrs E., age 39, 7. wife of a quarryman, mother of six children, who came into hospital suffering from a Floating Kidney. She complained of indefinite pains on the right side, shooting round from her back to the front of the abdomen. These pains had persisted for some months, since the birth of her last child eight months previously. She also complained of severe shooting pains in her privates and a white discharge. She suffered badly from headache and constipation, and sat up in bed supporting her abdomen with her hands, this being the position that gave her most ease. Her eldest child was 12 years of age, and the strain of frequent child-bearing had evidently had an effect upon her nervous system.

This pain had preyed upon her mind considerably, and she had made up her mind that an operation was necessary before she could get well again..

The abdominal wall was exceedingly lax, and upon examining, a moveable kidney could be felt on the right side. She complained of serious loss of sleep through the baby's fretfulness. She was put under chloroform, and the cervix attended to. Her recovery was slow, but in time she seemed to recover her strength. Her mind was relieved after the operation. Although perhaps the attention paid to her cervix had less to do with her recovery than the rest in bed (4 weeks), the regular and suitable diet, and the absence of family cares for a time. The pains in her back disappeared, and she

put on flesh and gained weight rapidly. She wore an abdominal belt with pad, which, she said, supported her whilst walking.

CASE The following case is one of a comparatively  
8. young man, A.H., aged 30, who came complaining of feeling extremely nervous, and of severe and persistent headache. He was a clerk in an office. He complained of having his sleep disturbed with dreams of a violent nature and of frequent seminal emissions which had alarmed him considerably. He found that he could not do his work as he formerly did. His history was good, there being no record of any venereal disease. He volunteered the statement that he had been given to masturbation and to this he attributed his present condition; but that was many years ago, and probably he had not indulged in the habit more than other boys have. His family history was not so good. His parents were extremely neurotic, and probably the sedentary life, and long hours in the office had helped to bring on his present complaint. His urine contained oxalates.

He was enabled to get away from his surroundings, and assured that in time he would get well. He took plenty of outdoor exercise, and regular diet, small doses of Bromide with Nux Vomica for two or three weeks, and then the hypophosphites were given with beneficial results, the patient making a good recovery.

CASE The last case is one of Traumatic Neurasthenia,  
90. occurring in a man, D.M., aged 55, an estate agent,

He came complaining of Siderodromophobia (the fear of travelling by train). Twelve months previously he had been in a railway accident, when, although he escaped, as he said, without any bruises, he received a severe shaking and fright, which kept him confined to his bed for a week. He had however, felt more or less nervous ever since, and could not bring himself to undertake another railway journey. He was an exceptionally well built and strong man, and had enjoyed almost perfect health until this accident, as his work necessitated his going about he was extremely anxious to get better. He complained of a feeling of dizziness which came suddenly and his vision, he said, was by no means as good as formerly. Nothing however, could be revealed by the Ophthalmoscope, nor could anything abnormal be found in any of the organs upon examination. The urine was normal. This nervousness lasted a considerable time, but gradually wore off under treatment, although it was some time before he could be persuaded to undertake another railway journey.

## CHAPTER III.

## The Causation of Neurasthenia.

Although Neurasthenia has probably existed at all times, most authorities agree that it is more frequently met with to-day than at any former time, and that it is increasing from day to day.

The reason for this is not far to seek: The struggle for existence has become keener; the effort of many persons predisposed to nervous disorders to keep up with their more fortunate fellows; the mode of living at the present time with its ever-increasing demands upon the individual; these tax in many cases the latent nervous energy to its utmost, with the result that nervous break-downs have become more frequent—one of the disadvantages, many as are the advantages, of modern civilization.

The causes of Neurasthenia can be divided into hereditary causes, and acquired, or more correctly predisposing and exciting. It is impossible, however, to distinguish sharply between the two, as they are frequently interchangeable. In many cases, one might venture to say in most cases, there is more than one

cause; for in many cases, although there may be a predisposition to Neurasthenia, its influence is not sufficiently strong to bring about of itself neurasthenia and thus an exciting cause is often required before the symptoms of neurasthenia make their appearance.

In other cases there are no predisposing causes at work, but only an exciting cause which apparently has no effect until the influence of a second exciting cause is superadded. It will be seen, ~~that~~ as has been incontestably proved, neurasthenia can arise de novo without any predisposing influences.

Heredity:--Of the predisposing causes the most potent is Hereditary influences, so much so that Anderson(1) thinks that all cases except marked traumatic cases have in them an element of hereditary weakness. This is however, not believed by most writers to be the case. Osler(2) truly says, "We do not all start life with the same amount of nerve capital". One rarely finds that the parents of neurasthenic patients suffered from neurasthenia, but, more frequently from some other nervous complaint. One sometimes finds upon enquiring into the family history of a case, that there is a general neurotic taint which seems to run through the whole family, several of which suffer from Epilepsy or Insanity or other nervous diseases. We saw an example of this in the second case mentioned in the last chapter where a brother of the patient committed suicide owing undoubtedly to the development of insanity, and whose father was extremely



neurotic. especially is this the case in regard to insanity, the offspring of persons suffering from, or with a hereditary taint of insanity have a deficient amount of nerve capital and frequently develop neurasthenia. One often finds that as time goes on in these cases they themselves develop insanity, the neurasthenia being merely the precursor of the more serious malady. Proust(3) mentions that there is frequently found in the line of ancestors of a patient suffering from various neuroses, derangements or diseases dependant on the arthritic diathesis, as gout, gravel, diabetes.

Again a *history* of alcoholism is frequently found in the parents of neurasthenics; and in these same cases one often finds there have been sexual excesses.

Savill(4) says that he has met with quite a number of cases whose family history shows no nervous ailments but Tuberculosis on one or both sides. In support of this Mott(5) says "Certain acquired conditions in the parents, affecting them especially at the time of conception, are liable to produce an inherent defect in the germinal plasma, they are acute and chronic alcoholism, Syphilis, and Tuberculosis".

The above hereditary influences act in varying degrees of intensity. In some cases the hereditary taint is so well marked that its victims are doomed, as it were, in spite of all attempts at prophylactic treatment to become the victims of neurasthenia, with but little h

hope of adding to their inadequate supply of nervous energy. It is important to recognise these cases for only in it's earlier stages can one hope to do anything to alleviate matters. Almost invariably in them neurasthenia develops during childhood, or at puberty, and persists throughout life.

The above, fortunately, is a small class compared with another where hereditary influences act solely as a predisposing cause, and require the addition of some exciting cause before the effects are felt. To this class belong a considerable portion of our neurasthenic patients, many of whom escape the effects of their inheritance provided they lead a quiet and well-regulated life, and are not pushed into the busy, active, and strenuous life of the larger cities.

In addition to the above, we must note the effect of infectious and toxic diseases, e.g. syphilis and other diseases existing in the parents at the time of conception, or in the mother during pregnancy. The debilitating effect of rapid child-bearing upon the mother is often reflected in the younger members of a family who become neurasthenic while their elder brothers and sisters show no traces of such tendencies.

Lockwood (6) points out the marriage of blood relations, also a disparity in the age of parents, as possible predisposing causes of Neurasthenia.

In addition to the misfortune of starting life with a neuropathic predisposition, many suffer after

birth, owing to the defective training that they receive at the hands of their parents. The parents of such cases seldom help by judicious training to repair the damage done by their own irrational lives.

**Country and Climate:--** In spite of Beard's assertion that Neurasthenia was an essentially American disease, we find it spread over most European countries especially France, Russia and Germany. Beard (7) himself says that Nervous Diseases, Organic and 'Functional, are met with more frequently in the Temperate Regions than in the extremes of heat and cold. He found that Neurasthenia in the United States of America diminished in frequency as one went South. The experience of Gould (8) scarcely coincides with this for he says, "High altitudes and extremes of climatic conditions favour its development." Hebrews, Slavs, and Scandinavians are especially subject to it. Clifford Allbutt (9) mentions that it is a common disease in Finland. Here, however, there are possibly the elements of peril and fear. What little has been written on the Climatology of Neurasthenia seems, however, to favour Beard's view, although climate and race do not seem to have a very marked influence in its causation.

**Age and Sex:--** Neurasthenia is commoner during the period of active life, in middle age than at the extremes of life. It rarely occurs in childhood except in those cases with very marked hereditary predisposition. Again, after the period of active life is over, it very

rarely makes its appearance, the period most frequently affected being from 20 to 50, although it may, and does, occur occasionally earlier or later. The active, busy, and often harassed life in man, and the anxieties of the reproductive period in women are the chief reasons for this age selection.

As regards sex, it is found almost equally common in both, perhaps slightly more often in the male sex. Von Hossling (10), however, found it far more frequently in males than females for out of a total of 828 cases mentioned by him 604 were males, and only 224 of the female sex.

Occupation:-- Persons following occupations that involve an in-door and sedentary life are most frequently attacked, for from Clerks, Merchants, Teachers and Journalists a large portion of neurasthenics are drawn. Any occupation, or profession, which necessitates a continued strain, either physical or mental, is extremely apt to cause it; thus we frequently meet it in medical men and students. The working class, although by no means exempt, are far less prone than the professional and commercial classes.

Great as the influence of predisposing causes is, we meet with many cases where there are no congenital defects. Any influences which entail a continued strain either upon the intellect or the emotions may themselves originate Neurasthenia.

Taking intellectual strain first, we meet it

occasionally among children during school life. The demands of education and the anxieties of competitive examinations occasionally tell their tale although as Proust says "The boys who sin from excess of zeal are rare": when fatigue sets in, they invariably stop work. In the majority of cases met with in school children there are other factors at work, for example, asthenopia or, eye strain from errors of refraction, also the surroundings in which school children work, improved though they are from what they were in former years as the want of ventilation and, sufficient light, the long hours with the consequent insufficiency of out door exercise. These probably are more powerful causes than the actual study.

With adults, however, the case is different; they do not stop when fatigue comes on but frequently continue their studies in order to attain some object or end in view with the result that they do not obtain the necessary amount of sleep requisite for recuperation from the baneful effects of overfatigue. The important element, again, inmost of these cases, is not so much the effect of overstudy as the harmful influence of some depressing emotion such as the anxiety of making both ends meet, the worry of some object to attain, the fear of failure. In the case of the minister (Case 5) mentioned previously, probably his anxiety concerning the welfare of his church was a more potent factor than the alleged overstudy. One sees occasionally, however cases where the cause must be put down as pure intell-

actual overstrain, where no depressing emotions were present. Coming to emotional strain we find in it probably the most frequent cause of the development of neurasthenia. It is associated often with most other causes of neurasthenia and frequently adds the final stroke. It appears from various reasons such as anxiety, vexation, unsatisfied ambition, sorrow and grief as the death of a child (Case I Chap II) blighted hope, unhappiness at home or elsewhere.

in the same category can be placed the cares of material life; it will be readily seen that emotional causes affect persons irrespective of their age or station in life often picking out those already suffering under the influence of other causes.

Coming to strain due to muscular exertion, it is probably less frequently a cause in itself than intellectual strain due to over study. Few cases have been recorded, <sup>and</sup> in most of them there has been some other cause at work affecting the emotions. Thus it is probable that cases due solely to undue stimulation of the motor centres and muscles are rare. And in all such cases a secondary and more influential cause should be sought for. The old adage still holds good. It is worry that kills not work.

Turning to a different aspect of life we find that a fruitful cause among the higher ranks in the social scale is the inordinate demand made upon the individual economy by the so-called "Life in Society". This is

frequently seen in cases of society ladies whose time, from day to day and through the greater part of the day, is fully occupied in attending social functions, dinners, balls, and evening parties, necessitating late hours. One might mention here that neurasthenia is a common malady amongst the idle classes who have no object in life other than their own amusement, who shun everything and anything that demands some of their time and thought, such as family cares and literary and other pursuits leaving them with plenty of time to brood over themselves and every minor ailment that they may have,

A far more important and more numerous class is that in which Neurasthenia develops in connection with some of the infectious, and sometimes organic diseases, the commonest of the former being Typhoid Fever, Influenza and Malaria. Especially is this the case with Influenza which seems in some way to affect the nutrition of the Brain and act as a nerve poison as Sir Andrew Clarke called it, It is invariably during the convalescence from these diseases that Neurasthenia makes its appearance. Especially is this so if any disturbing features arise during the convalescence. To a slighter degree we find Neurasthenia occurring in connection with other maladies such as Syphilis and other venereal diseases and the early stages of Graves' disease, and it is occasionally found associated with other nervous diseases as Locomotor Ataxy and General Paralysis,

Writers do not agree as to how far the habit of Masturbation can cause Neurasthenia. We frequently find patients complaining of excessive seminal emissions which were rather the effect than the cause of the Neurasthenia. In some cases, however, masturbation helps as an additional cause to bring on neurasthenia, and it certainly aggravates if it does not actually cause the condition. On the other hand some writers have grossly exaggerated <sup>g</sup>the rôle played by masturbation in the causation of neurasthenia.

Diseases of the Reproductive System in women appear to be in some cases the cause, and in others the effects of neurasthenia; thus minor complaints which in a healthy woman would scarcely be noticed seem in the neurasthenic to be materially increased and to keep up an irritable condition.

Cases are also met with where Pain, due to some other condition seems to be the cause, not so much on account of its severity but rather because of its long continuance. Thus long continued Neuralgia may be the starting point of neurasthenia,

The abuse of certain toxic agents such as Alcohol Tea and Tobacco and the excessive use of certain drugs as Morphia and Couaine are frequently seen as causes of neurasthenia. Especially is this the case as regards Alcohol possibly it produces it both by its own toxic agency and by its effect on the digestive system. Some interesting investigations



have been made by Dr Morton (11) and Dr Dana (12) on the effects of tea drinking. The results of both did not coincide for, whilst Morton found that in very many cases tea drinking had produced certain nervous disorders, Dana found that tea tasting was not injurious to health. Certain cases of idiosyncrasies are undoubtedly met with, apart from this tea drinking has not been satisfactorily proved as being a cause of Neurasthenia.

As regards the use of morphia and other drugs, it is probably more frequently the result than the cause of neurasthenia. Other toxic agents have been mentioned as having a casual relation to neurasthenia notably Lead, Mercury, and Bisulphide of Carbon. Probably the anaemia produced in many who work in connection with these agents helps to bring on a nervous state.

There are many other conditions which are met with in relation to the causation of neurasthenia for instance a floating Kidney is frequently met with in neurasthenia a case due partly to this was mentioned in the last chapter (Case 7).

Diseases of the Throat and NOse are mentioned by Sinkler(13) as possible causes.

The effect of Dyspepsia and its allied conditions such as Chronic Constipation and decayed teeth are given by many writers as the chief cause of neurasthenia and will be discussed in a later chapter,

Neurasthenia frequently follows surgical operations

the uncertainty and shock, with the necessary low diet are factors in these cases. Sudden fright and shock from other causes may produce it.

Finally we have a large number of cases which are due to traumatism, in many cases the actual bodily injury is slight, the nervous shock in some cases being the important agent, or even the mental impression at such times may suffice to bring on neurasthenia. The condition may appear almost immediately after the accident or may be delayed for some days or even weeks.

The neurasthenia due to traumatism resembles closely, and cannot be distinguished from, the neurasthenia due to other causes.

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## CHAPTER IV.

### The symptoms of Neurasthenia.

It is not very easy to classify, in any way, the symptoms of Neurasthenia, as they vary considerably almost in each individual case; nor is it possible to give a group of symptoms as being characteristic of the condition and found in all cases.

It is probably owing to this fact that many authorities even now deny the existence of neurasthenia as a separate disease. The entire absence, practically, of any objective phenomena which can be found with any degree of regularity renders still more difficult any attempts at distinguishing and separating neurasthenia from other conditions. Certain phenomena which are found in some cases, are absent in others, while in others totally different symptoms are found. As an example of this we may take the frequency of the pulse, in some cases tachycardia in a marked degree is found, whilst in others we find the pulse rate is much below normal. Again the persons affected with neurasthenia differ markedly from each other, whilst some are pale and thin, extremely depressed and speak deliberately

and answer in monosyllables; others although by no means robust and vigorous, as Beard says, are plump, capable of a certain amount of activity, and speak continually, and narrate to their medical advisor every detail of their trouble. Between these two extremes we have, of course, all gradations. When we remember however, that neurasthenia is a condition—a general condition—of the nervous system, we can understand how varied the symptoms may be, as the different systems and functions, or rather the nervous mechanism in relation to these systems and functions, are affected. Thus two cases may present to us symptoms entirely different, because in one a certain system is affected first before any other parts feel any effects, whilst in the other case a totally different part of the body becomes affected by this condition; and yet, while this is the case, no part of the nervous mechanism of the body entirely escapes.

Different as the symptoms of neurasthenia are from one another there is noticeable in each the element of fatigue, exhaustion and weakness. Associated with, and dependant upon, this exhaustion we get an irritable condition of the nervous system. It has been likened appropriately to stimulation of a fatigued muscle; upon stimulation we get first of all apparently increased contractions for a time; we get a response to stimuli which would have no effect in the normal

state; and then gradually the extent ~~of the extent~~ of the contractions diminishes until finally we get no response even with strong stimuli. There is in fact, an absence of the resistance which we find in the normal state, ~~and~~ <sup>thus</sup> associating this ~~ir~~ <sup>irrit</sup>ability with the exhausted state. Irritability, therefore, with a tendency to rapid fatigue and exhaustion is a characteristic of neurasthenia.

There are certain fundamental symptoms, which, although by no means present in all cases, are found in the majority of cases, and are characteristic of nervous exhaustion. These, perhaps, had better be described first :--

Headache.--This occurs in the majority of cases, and is sometimes the symptom most complained of; others again lay very little stress upon it, but, when questiondd about it, confess that they always have a headache. It is not exactly painful but a feeling of fulness, as though there was a weight on <sup>the</sup> top of their heads, or a feeling of emptiness and light-headedness. Others again complain of a feeling of constriction as though there ~~was~~ <sup>were</sup> a tight band around their heads the "casque neurasthenique" as Charcot called it, and occasionally there is a feeling of numbness.

The headache is not difused over the whole head but more frequently confined to one part, frequently the pain is over the back of the head or the occipital

region; others complain of pain over their eye-brows, or forehead, or vertex; sometimes it is confined to the temples on one side or the other. Patients can frequently put their finger on the painful spot. The headache is worst when the patient is tired and improves on resting, any attempt at work, especially at mental work, aggravates it. Patients frequently complain that they wake up in the morning with a headache. Associated with this headache there is in some cases a tenderness of the scalp, either over the whole scalp or at certain parts. Occasionally this tenderness is so marked that Beard<sup>1</sup> observed "that brushing the hair causes pain, even touching the tips of the hair is disagreeable.

Another frequent symptom is Insomnia, although it is certainly not present in all cases. It occurs however at one stage or another in most cases and especially after other symptoms have been existent for some time. Most writers have noted two phases: Some remain in bed, rolling and tossing for hours before they go to sleep, after which however they sleep until morning; others again have no difficulty in getting off to sleep, but after an hour or two they wake up and then invariably are forced to lie awake until morning,

Many complain that when they get into bed their minds ~~xxx~~ become unduly active; thoughts come into their heads and follow each other in quick succession in spite of all efforts to dispel them; imaginary

situations open themselves out before them; past events seem to take possession of their minds; and they live over again, as it were, the events of past days; many hear the least noises and are thus prevented from sleeping. Another frequent complaint is that they dream continually; some complain that they seem to dream all night and invariably their dreams are of a violent nature - they are being pursued by some animal, or are experiencing a railway accident.

Another interesting feature is that many complain that they suddenly awake with a start; they give a sudden jerk just as they were dropping off to sleep: this is much more marked in some than others and frequently occurs several times before they get off to sleep. With such uncertain, broken, and disturbed sleep it is easy to understand that they awake in the morning with a headache, feeling as tired as they did the night before, totally unrefreshed by their night's sleep.

Another frequent symptom is nervousness. Often one meets with cases whose only complaint is "that they feel so nervous" and associated with this is a certain muscular weakness: they soon get tired; everything exhausts them; every little effort such as reading or even talking makes them feel fatigued. They lose confidence in themselves; thus they are often compelled to give up their work.

The muscular weakness may be general over the whole body or restricted to certain parts of the body



or groups of muscles, thus the lower limbs may be the only affected part: yet however marked this muscular weakness is, it never goes to the extent of causing paralysis.

Some writers mention a temporary paralysis that is occasionally met with, but the experience of most men is, that wherever paralysis is present, something other than neurasthenia should be suspected and looked for. Patients frequently complain of pains in the back, along the spine. It may be equally felt along the whole of the back or it may be confined to certain parts, the most frequent being in the lumbar region. The feeling is one of discomfort, a dragging sensation, occasionally it is felt most acutely in the cervical region. Others complain of pain in the sacrum or at the tip of the coccyx. As in the case of the head there is, in some instances, a tenderness on pressure, certain spots being particularly tender to the touch.

Most neurasthenics complain of symptoms referable to the digestive organs. In many cases they are prominent, in others they are merely secondary to the general condition and apparently have little effect on the individual. The symptoms chiefly complained of are pains in the epigastrium especially some time after food loss of appetite, furred tongue, constipation with attacks of diarrhoea in some, eructations, swelling in the epigastrium, and very occasionally vomiting.

Associated with the above symptoms we find, in practically all cases, a certain depressed and irritable mental state, which shows itself in many ways. Many have imaginary fears of various kinds, there is a loss of memory, <sup>and</sup> inability of concentration on work. They complain that they are unable to think or to associate ideas, are unable to grasp anything that they may be reading, and unable to make up their minds owing to deficient will-power.

This makes them depressed, and an irritable temper is often displayed. They lose hope; and whilst they do not have any fixed delusion or hallucinations they imagine that they are the victims of many diseases. All true cases of neurasthenia however can be reassured by a person they have faith in, unlike cases <sup>of</sup> hypochondriasis.

The above, are briefly the symptoms generally met with in most cases of neurasthenia, and give a fair idea of the usual neurasthenic. There are, however, many other symptoms met with which perhaps are best classified under the different systems they affect.

Alimentary system .- As already mentioned, symptoms of gastro - intestinal disorder are frequently met with in neurasthenia. They may make their appearance months before any other neurasthenic symptoms, and they vary considerably in severity in the different cases. This question has been studied chiefly in France.

Bouveret<sup>(2)</sup> and Mathieu<sup>ieu</sup> (3) have added considerably to the literature on this question.

Bouveret described two grades of gastro-intestinal atony, the slight and the severe. In the former it does not have any marked effect upon the general nutrition of the patient, he preserves his appetite and does not become emaciated.

The symptoms come on at different times; in a few cases they occur immediately on taking food, in the majority of cases however they come on half to one hour after food.

There is a heavy feeling in the epigastrium, and a feeling of distension in the stomach and bowels; there is usually constipation; the faeces are often hard scybalous masses. Some writers have mentioned a pseudo-membranous entero-colitis as occurring.

In the more severe form the patient is invariably emaciated and loses weight rapidly, and often appears as though he were suffering from malignant disease of the stomach; some of these cases wilfully refuse any food they approach: the type known as "Anorexia nervosa." Upon examination, dilatation of the stomach can be made out in the most severe cases.

The analysis of the gastric juice in these cases has been studied carefully by Bouveret and Mathieu altho' their conclusions scarcely coincide.

Bouveret<sup>e</sup> (2) in his treatise states that the chief change in the gastric juice is a diminution or absence of the hydrochloric acid. He found this to be so in all cases; the pepsin was not changed in amount.

On the other hand Mathieu (3)<sup>found</sup> that in the slight form there was practically no change in the chemistry of the gastric juice, but that in the more severe cases there was frequently a hypersecretion of the hydrochloric acid. Herzog (4) found that hyperacidity occurred more frequently than diminished acidity; he found also that in a majority of cases the motor functions were impaired.

Probably cases are met with which correspond with the findings of each of the above writers. Cases with hyperchlorhydia being more frequently seen than those with diminished secretion of hydrochloric acid, although the later are sometimes seen. In most cases the muscular tone of the stomach seems to be affected. These gastric symptoms are invariably attended by depression of spirits, restlessness, and other nervous symptoms.

Haemopoietic System: :- Few if any changes occur in the blood in cases of neurasthenia. Anaemia is met with in certain cases especially in neurasthenia of a sexual origin.

MacPhail (5) speaks of the marked anaemia usually found in insane and other masturbators, this has been confirmed by other clinicians.

Most cases, however, in spite of their anaemic appearance have normal blood. Luxemburg (6) in a study of many cases found that polycythaemia was common, having repeatedly noted erythrocyte counts as high as 6,000,000 per cubic millimetre, he attributes this to vasomotor changes,

Reinert (7) examining 74 cases found normal blood in neurasthenia, and diminution of haemoglobin in cases of hysteria. In many cases a relatively increased proportion of lymphocytes may be observed.

**Circulatory System :-** Disturbances of the heart and circulation are so frequently met with that many observers describe them under a special type called "Cardiac Neurasthenia". They are, however, merely symptoms of the general conditions although in some cases they are especially prominent.

Palpitation is a common and annoying symptom in many cases : it varies in different subjects, many complain that they feel their heart beating and their arteries throbbing, especially so when in bed at night preventing them from sleeping. This frequently distresses them greatly. No bruits are to be heard except in anaemic cases when the usual haemic murmurs can be made out. The pulse varies greatly in many cases. Tachycardia is frequently met with; the pulse beats may rise to 120 or even more per minute, the pulse may be irregular and intermittent; pulsation in the carotids is marked in some cases. In a smaller number of cases

the opposite is found, Bradycardia, the pulse in some cases slowing down to 50 per minute, here <sup>a</sup>gain, irregularity may be detected frequently. A marked feature of the pulse is its excitability.

The arterial tension varies in different cases, and also during the day according to Brown(8).

In the same case, he has noted that the tension is lowest before a meal and highest after a full meal. With the rise and fall of the arterial tension the patient's temperament changes for with the temporary elevations come his moments of hopefulness which disappear as the period of low tension comes on.

The arterial tension is however in the majority of cases below the mean so much so that other diseases should be suspected if the arterial tension rises.

Erben(9) has described a peculiar pulse.- phenomenon in neurasthenia. If a patient bends forward or makes an attempt to sit down a distinct and easily appreciable slowing of the pulse takes place, which, however, returns to normal in a very short time, whether the patient resumes the erect position or not. Even neurasthenics with tachycardia show this phenomenon whilst individuals do not. Erben attributes it to vagus irritation.

Attacks of pseudoangina pectoris are met with in neurasthenia. The patient complains of pain suddenly in the preacordial region which radiates down his arm. He seems to be in great anguish, and evidently greatly

frightened, the breathing may be quickened for a few minutes until the attack passes off.

In connection with the circulatory disturbances, many symptoms due to vasomotor changes may be mentioned. Patients frequently complain of cold hands and feet, that they frequently go numb, and that prickling sensations are felt in them. This is apparently due to constriction of the arterioles. Again, vasodilatation may occur when blushings are found. This may occur on the slightest provocation in blotches or patches about the face and chest. Beard(10) remarks on an interesting case observed by Sir James Paget, where this feature occurred in mother and daughter, and regards it rightly among the most ~~characteristic~~<sup>characteristic</sup> symptoms of neurasthenia. In addition to this there is a tendency to oedema, which appears especially in the face and on the hands and feet and which cannot be ascribed to renal disease or more grave disorders of the circulation.

Profuse sweating is a characteristic feature of many cases, it occurs especially in the extremities, the palms of the hands and in the feet, and in consequence damp cold hands and feet are of common occurrence.

Occasionally the sweat contains foreign substances smelling and rarely coloured.

But the reverse may be the case and dryness of hands and feet as well as over the body generally, may be observed.

Yawning and sighing are frequent signs of neurasthenia.

Urinary System. :- We find changes although by no means constant in the urine . There is frequently polyuria, although this is not so marked as in hysteria for we not infrequently meet with cases where the amount of urine secreted is small. Phosphates and urates are frequently found in the urine, also oxalates. It is usually acid in reaction and spermatozoa can occasionally be detected in it. Glycosuria is occasionally met with, and owing to a similarity of many of the symptoms, as increased thirst, impotency, and presence of copper reducing substances in the urine, it has been confused with diabetes mellitus .

Changes in the ~~Sense~~ organs :-

Eye :- The chief condition observed in the eye is a neurasthenic asthenopia. This is most frequently met with in children :- they are unable to see clearly the words of the print they are reading, and complain that the words are blurred; they try by an effort to overcome this and bring the book closer to their eyes, and later closer still, until finally they have to give it up. Associated with this we often find severe headaches and smarting with watering of the eyes.

The defect is purely functional and does not depend on any organic disease in the retina or other parts of the eye, consequently no changes can be detected in the fundus oculi upon ophthalmoscopic examination.



Another symptom occasionally met with is *muscae volitantes*, floating specks<sup>K</sup> before the eyes, which occurs at times and is brought<sup>on</sup> by certain exciting causes, There is also photophobia in many cases (case<sup>2</sup><sub>A</sub> Chap II).

They dread the light and often sit in darkened rooms.

The pupils are invariably dilated and some have described a slow reaction of the pupils .

A point upon which there is some difference of opinion is the narrowing of the field of vision, which some say occurs in neurasthenia. Horsley(11) among others has noted it and finds that it is in some cases bilateral.

Clifford Allbutt,(12) however, thinks that "the visual fields are of normal extent, but the retina fatigues so quickly that the spot on the perimeter must be pushed not too slowly from periphery to centre. If it be pushed slowly from centre to periphery perception may die out and part of the field declared absent". Konig (13) agrees with Allbutt in thinking that the visual fields are not diminished. Swanzy(14) mentions that, in some cases, the fatigue field of vision can be made out.

Ear :- Turning to the auditory apparatus we find the chief defect is an acuteness of hearing, hyperacusis, an irritable condition. Patients hear the slightest sounds and the traffic at night whilst lying in bed; they also complain of buzzings in the ear.

In the same way the senses of taste and smell

show signs of irritability. Complaint is made of disagreeable, peculiar, and abnormal tastes and odours. In none of these cases can any disease of the organ in question be found; it seems rather to be due to the extreme sensibility of the nerves in relation to these special senses.

The Sexual Organs :- Symptoms relating to the genital organs are frequently classified under the name of sexual or genital neurasthenia.

Patients complain of spermatorrhoea without the customary pleasurable sensations, priapism, speedy ejaculation on coitus, and also there is a marked decrease of the sexual appetite and in some cases impotence. Others complain of emissions on the slightest stimulation as meeting a woman, or any friction, or during micturition. They also have pains in the thighs and loins.

Patients who suffer from these symptoms often confess to previous sexual excesses and masturbation or venereal diseases as chronic gonorrhoea, and often themselves lay great stress upon their previous excesses and attribute their present condition to them. Occasionally upon examination a painful testicle is found. This is allied to the painful ovary or mamma in the female. Patients suffering in this way differ greatly from each other, for whilst some are unabashed and will speak glibly of their symptoms and previous excesses in a disgusting manner, others again speak little and go about in a hang-dog way neglecting their business, giving up

their whole time and thought to pondering over and examining into their symptoms.

This group of symptoms is sometimes the result of inherited degeneration or it may be acquired. They are often the cause of neurasthenia but frequently, on the other hand, are the effects of neurasthenia. All such patients are not masturbators and many are to be pitied rather than upbraided.

In some the symptoms are slight and pass away as the neurasthenia is treated. In others again the symptoms grow worse and are difficult to treat. From this class Hypochondriasis draws many of its victims.

The Nervous System :- Here we find as one would naturally expect the marked alterations in function, and few neurasthenics, if any, exist who do not show some nervous changes. A frequent symptom found is vertigo varying in intensity in different cases. It is not usually constant but occurs occasionally in severe attacks resembling sometimes the attacks observed in Ménière's disease.

Disorders of sensation are also frequently met with. The most frequent ~~not with~~ <sup>being</sup> is hyperaesthesia. As already mentioned the scalp is tender, and in other cases there are tender spots along the spine, or it may be, but more rarely, hyperaesthesia of the whole spinal column. These cases are the spinal irritation of former days. Sensory nerves, being normally more excitable than motor nerves, it is natural that one finds this hyperaesthesia in so many cases. This condition

causes the patient much discomfort. He frequently complains of pains in the muscles of the limbs. These symptoms are, however, entirely subjective and nothing can be made out upon examination.

Hyper<sup>a</sup>esthesia in neurasthenia never passes on, as in hysteria, to anaesthesia, although one or two writers have remarked on such cases. This is however entirely opposed to the experience of most observers. The reflexes both superficial and deep, especially the later<sup>t</sup> are usually exaggerated in neurasthenia, but this again is not constant, as in some severe cases the reflexes have been absent. We find in some cases ticklishness, also vague pains and itching either general or local. In addition to this we must mention an irritability of mental equilibrium seen by rapid changes of temper, timidity, loss of memory, and sudden unaccountable sense of discomfort, depression and sadness. Such sufferers feel unhappy and often try to make those around them unhappy. Anxiety and fear are sometimes met with; they may be present in a slight degree only, or again in a more severe and troublesome form. Certain fears and anxieties of various kinds seem to take hold of the patient. These are called phobias the commonest being, perhaps, 'agoraphobia' where patients dread to be left in an open space. They cannot cross a market place, but strangely enough, in many cases, will do so if accompanied by another person or even with a child or walking stick. Another fear frequently met with is 'claustrophobia' or 'domatophobia' as it is

sometimes called -- the fear of being left in a closed place or room. Various kinds of fears have been described, the following are examples :- 'batophobia', the fear when passing a high wall; 'monophobia', the fear of being alone; and the opposite 'anthrophobia', the fear of being with others; 'pathophobia', the fear of being ill; 'astrophobia', the fear of lightning; 'rupophobia', the fear of being dirty; 'mysophobia', the fear of contamination. An interesting case of this last was met with by the writer, the person being scrupulously clean as to what he ate, washing his hands several times a day lest he should by any means take in some dirt along with his food. 'siderodromophobia', the fear of going by train, (Case IX. Chap II) 'nyctophobia', the fear of night. These could easily be multiplied but to no purpose: the different forms all point to the mental state of the individual.

Beard(15) lays great stress upon them and says that they are symptomatic of functional, never, or rarely, of organic diseases "The existence of any of these symptoms in a doubtful case of diagnosis" he says "would alone almost establish the nature of the disease, or enable us to give the casting vote".

In those cases one should be careful before giving any opinion. If very slight and temporary, they are symptoms of neurasthenia, but if more severe and permanent they pass into the gravest condition of mental disorder.

Conditions similar to the above are met with in the doubts which beset some cases, for instance, whether he had wound up his watch, or whether he had turned out

the gas, or barred the outside door. These conditions simple as they may seem, are often closely allied to insanity.

Beard describes a condition which he calls Hemi-Neurasthenia, where the symptoms are displayed merely on one side of the body and then in preference on the left. Thus pain may be confined to one side, or the noises in the ear may occur on one side only. It is doubtful whether Beard is correct in thinking *that* merely half the body is affected. It may be merely because the left side is more excitable on account of its smaller power of ~~resistance~~ than the right. We frequently, in other diseases, find that symptoms develop more readily on the left than on the right side:- thus the secretion of sweat is occasionally found on one side only, and the hair as a rule becomes grey sooner on the left side.

It will be readily seen that the symptoms of neurasthenia are numerous and extremely varied. Thus while in one case we find a certain group of symptoms, related to a certain function, *prevailing*, we find in other cases symptoms entirely different, *present*. For this reason, among others, writers describe different forms or types of neurasthenia. All are, however, closely linked together and exhibit, although in different ways, an exhausted and irritable condition of the nervous system, and in most cases all portions of the nervous apparatus partake to some degree of this exhaustion.

The different forms described are Cerebral neurasthenia, Spinal neurasthenia, and Cerebrospinal neurasthenia according as the symptoms refer to the head or spinal regions or both (16) or, according to Clifford Allbutt (17) into cerebral, spinal, cardiac, and vasomotor, gastro-intestinal and sexual forms, besides the traumatic group.

Other forms described are Lithaemic, Toxic, and Fatigue neurasthenia.

Some writers among them Oppenheim (18) think that the divisions are unnecessary and not practical.

One form, Traumatic neurasthenia or "railway spine" as it was formerly known should perhaps be mentioned as being somewhat apart from the others, although the symptoms here are almost the same as in other forms of neurasthenia., The symptoms may come on immediately after the accident or, and far more frequently, be delayed for some days and come gradually.

Horsley(19) divides these cases into acute and chronic and, in connection with the acute cases, points out that a not infrequent and noticeable feature is a rise of temperature without the other concomitant symptoms of pyrexia. Although the temperature does not usually rise above  $101^{\circ}$  F he mentions a case where it rose to  $113^{\circ}$  F . It was formerly regarded as an inflammation of the cord and meninges until its relation to neurasthenia was pointed out. There is in Traumatic neurasthenia frequently an element of hysteria, the two being frequently associated in cases due to

traumatism.

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## Chapter V.

### THE DIAGNOSIS OF NEURASTHENIA.

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The diagnosis of neurasthenia is not always, as some say, an easy matter. Its symptoms are so vague, and resemble so closely those of other diseases such as Hysteria and Hypochondriasis and many others that some writers, Arndt in particular, regard it as merely the starting point of other diseases.

The symptoms of neurasthenia are certainly numerous and varied: they extend over a wide area and pass almost imperceptibly into, and frequently overlap, those of Hysteria on the one hand, and enter the confines of true insanity on the other.

The absence of physical signs and the fact that the subjective phenomena, and the patient's account are all that one has to guide him in coming to a diagnosis, shows the importance of watching a case closely and listening carefully to the patient's story, and taking into account all the symptoms before deciding definitely as to the nature of the malady.

It is true that the absence of physical signs is a help in a sense in diagnosing neurasthenia from certain organic diseases of the brain and spinal cord; but negative evidence is never so convincing as positive.

Whilst, upholding the retention of neurasthenia

as a separate and distinct malady the term has, one must confess, been too loosely applied to many cases in the past: cases of temporary exhaustion due to intellectual or physical strain have been too readily diagnosed as cases of neurasthenia.

Another factor which must not be lost sight of is that two conditions, may and frequently do, consist in the same individual. In this way neurasthenia and hysteria are often met with. Charcot<sup>(1)</sup> calls such cases hysteroneurasthenia.

Cases of neurasthenia which are of long standing especially if the anxieties and various fears mentioned in the last chapter are present frequently in time become hypochondriacal, and then some go again a step further and become typical and often prominent cases of delusional insanity.

Other cases of neurasthenia in whose family has a taint of insanity pass in time themselves into insanity.

Whilst thus admitting that neurasthenia is sometimes merely the precursor of other more diseases, it must be remembered that the majority of cases run a normal course and recover, are easily diagnosed, and at no time shew any signs of the development of other diseases.

Neurasthenia resembles other diseases in many ways. The following symptoms vertigo, paraesthesia, headache, rapid pulse, loss of appetite, coldness of extremities, shooting pains, impotence and others which are found in

neurasthenia are frequently met with in other diseases so in making a diagnosis no dependence should be placed upon a single symptom but all should be taken together.

There are certain cardinal symptoms of which the following are examples, which are fairly diagnostic of neurasthenia. They are tender scalp, asthenopia, spinal hyperaesthesia, gastric disturbances, muscular weakness, genital troubles, and also the mental condition anxiety, certain fears, and irritability and inability of concentration which will help materially in deciding.

The diseases from which neurasthenia requires to be differentiated are certain organic diseases of the brain and cord, hysteria, hypochondriasis, anaemia, lithaemia, syphilis, early stages of exophthalmic goitre, primary dyspepsia, and insanity, and to a lesser degree alcoholism and petit mal.

1. Organic diseases :- The organic diseases with which neurasthenia is at all likely to be confused are tabes dorsalis and general paralysis of the insane.

The importance of making in each case a careful physical examination is seen here. The symptoms in neurasthenia are not nearly so permanent as in organic diseases but vary greatly and come and go. The reflexes in neurasthenia are often exaggerated whilst in organic diseases they are diminished or absent.

In tabes the pupillary changes which if found would settle the diagnosis should be searched for

carefully in all cases. Any evidence of paralysis of certain muscles or difficulty of articulation should put neurasthenia out of the question.

2. ~~Hysteria~~, -This is perhaps the disease with which neurasthenia is most frequently confused, owing, probably to the great similarity of many of the symptoms in each and to the coexistence of both diseases in the same individual. There are, however, many differences, though slight perhaps, which, when taken collectively, will enable one to differentiate.

The age at which both diseases appear differs, for while neurasthenia appears as a rule between the ages of 15 and 60, hysteria very rarely occurs after 30. As regards the sex, hysteria is, although not exclusively, almost confined to the female sex; neurasthenia, on the other hand while common in both sexes is slightly more prevalent among males.

The ~~onset~~ of the two diseases differs, for while it is sudden in hysteria in neurasthenia, unless due to traumatism, it is gradual; Recovery in both varies in the same way, being rapid usually in hysteria and slow in neurasthenia. The course of neurasthenia is more regular and certain than that of hysteria.

The general health in hysteria may be almost perfect and intellect unaffected; neurasthenia affects those with impaired health, and the intellect is not as keen as it formerly was.

The hysterical patient is more emotional than the neurasthenic and cries and laughs alternately at

short intervals.

Neurasthenics are usually depressed whilst persons with hysteria, although subject to fits of depression are invariably in good spirits at other times.

In hysteria there are paroxysms and various attacks which are not met with in neurasthenia. The globus hystericus is a frequent symptom in hysteria, also areas of anaesthesia, and contractures which are very rarely if ever, met with in neurasthenia.

Concentric contraction of the field of vision is present in hysteria whereas it does not appear in neurasthenia except under the circumstances mentioned in the last chapter.

The hysterical woman looks for sympathy, the neurasthenic seeks relief. The main feature of neurasthenia is exhaustion, of hysteria it is deficient will-control and reflex excitability. Allbutt<sup>(2)</sup> thinks that in hysteria to make persistent efforts to fight against the disability is nearly always beneficial, in neurasthenia it is usually injurious.

The cause varies somewhat in both conditions; hysteria is nearly always hereditary, in neurasthenia, whilst very probably a congenital predisposition is present, an exciting cause is more frequently found than in hysteria.

The difference between the two appears when the varying symptoms are arranged in tabular form.

NEURASTHENIA

Age 15-60 years.

As common in men as in women.

Gradual onset, steady course, slow cure.

General health is impaired.

Absent.

Rare if ever.

Absent.

Exhaustion and irritability.

Anxious for cure

HYSTERIA

Generally appears before 30.

Almost always in women.

Sudden onset, erratic course and may be sudden cure.

May occur in physically healthy people.

Parosysms and crises.

Globus hystericus, areas of anaesthesia, contractures.

Contraction of visual field.

Reflex excitability & deficient will-power.

Craves for sympathy.

3. Hypochondriasis. The typical and advanced hypochondriac is easily distinguished, but there are cases which resemble somewhat neurasthenia.

In hypochondriasis there is a fixed delusion. Patients seem to have it fixed in their minds that they are suffering from a serious malady, frequently of a malignant nature; and, although they go to their medical attendant and dilate usually at great length on their troubles, possibly with the hope of being cured, they are unwillingly to believe when assured that there is nothing serious the matter with them and seek further

advice either from some other medical man or from any medical books that they may have access to. The neurasthenic on the other hand, although he may think that he is suffering from some serious malady, is reassured by any medical man, in whom he has faith, when informed as to the nature of his complaint and the groundlessness of his fear pointed out to him. In hypochondriasis you have this continual introspection not met with in neurasthenia.

Hypochondriasis is almost, but not exclusively, confined to the male sex, and occurs on an average at a somewhat later age than neurasthenia, the average hypochondriac is from 40-50 years of age, The condition is very rarely seen in early adult life.

The hypochondriac concentrates his whole thought and intellect and gives up all the time he can spare to the study of this one idea, this imaginary disease from which he is suffering and examines as far as he is able all the organs and secretions of his body and is in a perpetual state of sadness with no taste whatever for amusements.

4. Anaemia . Many think that anaemia is at the bottom of most cases of neurasthenia, and that it accounts for the nervous exhaustion. This is, however by no means the case. Anaemia is certainly sometimes met with in cases of neurasthenia but is is frequently more apparent than real, and upon examination their blood is found to be normal. In sexual neurasthenia there is frequently found anaemia, however, but many

neurasthenics are found who are the opposite of anaemia.

No haemic bruits can be heard in neurasthenia as in anaemia. In anaemia there is generally, although not always, some organic disease present frequently causing the anaemia: no such cause is found in neurasthenia.

The treatment in both differs considerably for anaemia is benefitted and generally cured by Iron; while this is not sufficient to overcome neurasthenia.

5. Lithaemia. So frequently are urates met with in the urine of neurasthenic patients that some describe a Lithaemic neurasthenia among the different types of the malady. The headache met with in both cases differs. In lithaemia the headache is certainly more severe and painful but does not last so long; in neurasthenia the headache is rather a feeling of pressure but continually present. The vasomotor phenomena are not as a rule so prominent in lithaemia as in neurasthenia.

The mental state differs in the two conditions. Beard<sup>(3)</sup> says "The neurasthenic may be at times extremely irritable," but this irritability is more passive than active, any ebullition of angry feeling is quite evanescent. The touchy mood of the lithaemic person, on the contrary, may last for days or weeks". Oxalates are not found in the urine of lithaemic persons as in neurasthenia. The pulse is also usually slower in lithaemia than in neurasthenia although the pulse may be, as already mentioned, very slow in neurasthenia.

6. Syphilis. Syphilis will not often be confused



with neurasthenia, although the tinglings and lightning pains and twichings in the limbs are fairly characteristic of both, but generally other symptoms diagnostic of syphilis can be detected and should be looked for. The history of the patient will often give a clue.

Failing other evidence the effect of anti-syphilitic treatment should be watched.

7. Petit Mal. Here the case should be closely watched and invariably, sooner or later, an attack of grand mal will clear up the case.

8. Insanity. The importance of diagnosis between neurasthenia and insanity cannot be insisted upon too strongly. It is frequently difficult to draw the line between bad cases of neurasthenia with mental symptoms and mild cases of melancholia or delusional insanity. The family history must be taken into account and if any taint of insanity be found the diagnosis of neurasthenia should be made remembering that it may only be a temporary precursor of insanity. Some writers such as Savill<sup>(4)</sup> described cases under the title of neurasthenic Insanity as a stepping stone between cerebral neurasthenia and true insanity where we have many of the symptoms of neurasthenia along within an extreme degree of mental weakness which, however is only temporary and does not seem to go on to true insanity and where delusions and hallucinations are usually rare.

It is difficult to lay down hard and fast rules

for distinguishing the two conditions but each case must rather be considered separately and due weight be put upon hereditary history of insanity and remembering that neurasthenia is in some cases but a stage, although sometimes lasting for years, prior to the development of true insanity.

As regards the diagnosis of Tra<sup>m</sup>matic neurasthenia one must guard against malingering and be quick to detect it. This is rendered difficult as little can be made out on physical examination. Malingerers, if carefully watched, can be caught either by their over doing it or neglecting to keep up "the part." In cases of injury organic diseases must of course be sought for.

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## CHAPTER VI.

### The Etiology of Neurasthenia.

The actual pathology of ~~Neurasthenia~~ is unfortunately unknown, as the various theories that have been brought forward, by various authors at different times, all claiming to be the true cause of neurasthenia, prove too well. Troublesome and lasting as the disease is, no death as far as I am aware, has been actually attributed to it; hence no post-mortem examination of a case of neurasthenia has been recorded.

Various theories differing widely from each other have, however, been suggested. The symptoms all point to the nervous system, as being the affected part of the body. Weakness and exhaustion combined with a certain irritability of the nervous system are the chief factors, together with some vasomotor and sympathetic changes. There is a deficiency of nerve force in most cases, or rather a failure to recover after fatigue such as occurs in the normal state. Savill (1) likens nerve force to electrical forces. He says, "Just as a faradic battery, after continuous use, generally becomes weaker — we can hear the note emitted by the interrupter become more and more feeble — and then after a rest, becomes restored again, so does nerve force require periods of intermission for recuperation". This comparison, faulty as it naturally is, helps to a certain extent to point out, the effect of many of the exciting causes that bring on neurasthenia, and the necessity of

sufficient rest. As already mentioned these act in different ways and to varying extent in different individuals, according as the nervous system is able to withstand them, for some nervous systems are able to withstand longer any fatiguing influences that may be at work. They have a more abundant supply of nerve capital than others, and feel less the influence of over-fatigue than their more unfortunate fellows.

The chief theories maintained are :- (a) The nervous theory primarily suggested by Beard and supported by many other writers (b) Various Gastric theories by Bouchard, and upheld, more recently, by several others. (c) Vasomotor theory chiefly studied and brought forward by Anjel, and (d) Glénard's theory which briefly put is that neurasthenia is due to sinking of some of the abdominal viscera.

Taking Beard's (2) theory first, we find that he holds there is, in all cases of neurasthenia, an impoverishment of the nerve-force which accounts for the symptoms of exhaustion, pain, and morbid sensations. He holds that the balance between waste and repair is not maintained : the expenditure is greater than the supply with the consequence that there is a weakened and unstable nerve force. Taking this weakened nerve-force as the basis, there is excessive irritability, either reflex or direct. The circulatory system demonstrates this, the heart and vessels being well supplied with nerves are naturally, in many cases, the portion of the body affected first. They are in consequence in

an unstable condition, hence we get the so-called irritable heart, with palpitation. In the same way the whole body is affected; the blood vessels are liable to changes in their calibre, and thus we get a tendency to dilatations and local hyperaemias. The nerves control the arteries, producing anaemias, hyperaemias, and congestions. In this way the blushings, pallors, and sweatings met with in neurasthenia are explained.

Beard, considers it probable that local hyperaemia of the various portions of the body is sufficient to account for most of the symptoms met with in neurasthenia, and thinks that, could we but examine such cases, we should find hyperaemia of the affected part: of the brain, in cases of cerebral neurasthenia: of the spine, in cases of irritable spine: or of the stomach, in cases where the symptoms point to gastric disorders. These changes in the blood supply which perhaps would cause no discomfort to a healthy person, do so in the case of a neurasthenic, as in these cases there is a derangement of the central nervous systems; and persons whilst in a neurasthenic state suffer considerably from a trifling change in the amount of blood in a part.

In recapitulating his views on the pathology of neurasthenia, Beard says, "neurasthenia is a chronic, functional disease <sup>of the nervous system</sup>, the basis of which is impoverishment of nervous force, waste of nerve-tissue in excess of repair; hence the lack of inhibitory or controlling power - physical and mental - the feebleness and in-

stability of nerve action, and the excessive sensitive-ness and irritability local and general, direct and reflex".

Whilst neurasthenia may exist entirely independent of anaemia, as many patients subject to neurasthenia prove, Beard thinks that possibly the blood changes in its constitution with the various states of neurasthenia, and that such changes may, in a few cases, be detected by examination.

In view of the Gastric theory of neurasthenia Beard's views as to the occurrence of gastric trouble in connection with neurasthenia are interesting. It may, he says, occur at any stage of the neurasthenia either before, during or after, the neurasthenic symptoms become manifest. Where dyspepsia precedes the neurasthenic state, he thinks that the nerves in connection with the stomach are the first to be affected holding, as he does, that in different cases, certain parts of the body, or rather the nerves controlling a certain part, may yield long before those of other portions of the body. Thus in another case the nerves related to the spine or brain may be the part showing changes. He says that a distinction can be drawn between gastric symptoms due to neurasthenia and those due to changes in the stomach itself, by their intermittent nature being absent perhaps altogether on a certain day and prominent on the following day, also by the fact that they are frequently cured by remedies and other efforts directed to the nervous system, which would have little or no effect if the symptoms

were of local origin.

Coming to the gastric <sup>theory</sup> of neurasthenia, we find it first brought forward by Professor Bouchard who held that neurasthenia was caused by an auto-intoxication produced by certain changes in the stomach. He held that there was a certain weakness of the muscular walls of the stomach, brought about by various <sup>hereditary</sup> causes, producing dilatation of the stomach. The result of this being that the stomach remained full of portions of food, <sup>liquids,</sup> and gastric juice, thus setting up fermentation. From this, again, it resulted that the contents of the stomach became putrified, and in this way various toxins were produced.

These toxins were absorbed and, whilst circulating in the body, produced an auto-intoxication, and manifested their presence by producing symptoms such as fatigue, headache, giddiness, and the gastric symptoms which are observed in the subjects of gastric neurasthenia. He held that the liver which in normal persons opposes the circulation of such toxins was overcome by the abundance of the toxins.

More recently Savill(3) has advocated this gastric theory of neurasthenia and based his arguments upon the investigations of a large number of cases; yet, whilst granting that there are such cases where the gastric symptoms are secondary and clearly due to the neurasthenia, he holds, for many reasons, that, in the vast majority of cases, the symptoms of neurasthenia are secondary and moreover due to the gastric troubles. Another gastric theory, supported

by Hayem and others, must be mentioned differing to some extent from the preceding. It supposes that dyspepsia, from any cause, with or without dilatation of the stomach, causes anaemia and also affects the nutrition of the whole body, especially that of the nervous system. This theory does not attribute the symptoms produced to toxins, but rather to certain albuminoid products caused by abnormal changes occurring during digestion.

The above therefore are the chief, and the most generally accepted, views as to the etiology of neurasthenia, and before mentioning the various other theories brought forward, it would be as well, perhaps, to give the arguments for and against the above theories.

Savill gives eight reasons in favour of the gastric origin of neurasthenia.

First :- That the gastric derangement preceded the symptoms of neurasthenia by varying periods of time in nearly three-fourths of the cases he met with. In a table (4) showing the relation of gastric disorder to neurasthenia, he points out that of 157 consecutive cases, 102 showed evidence of definite gastric disorder of different types and of these 102 cases 74, or 72.5%, presented gastric symptoms prior to the general symptoms of neurasthenia. Analysing them still more minutely, he found that in six cases the gastric disorder preceded the neurasthenic symptoms by more than seven years; in ten cases between five



and seven years; and by periods varying from six months to five years in the rest. He asks whether it is likely that the general neurasthenic symptoms would have lain dormant all this time?

Secondly :- That the symptoms of gastric disorder in these cases were definite, constant, and consistent.

Thirdly :- That the gastric derangement was due to the usual causes, thus disproving, as Beard would suggest, that neurasthenia was the original cause of the symptoms.

Fourthly :- That the disorder of the stomach belonged to the several different recognized varieties, chiefly the atonic dyspepsia.

Fifthly :- That gastric derangements are invariably attended by depression of spirits, restlessness, and other nervous symptoms.

Sixthly Many of the cases were closely observed by the medical attendant, therefore the sequence of events would likely be known and accurate.

Seventhly :- The symptoms were definitely related to, and considerably worse after meals.

Eighthly :- That as soon as the indigestion improves the neurasthenic symptoms begin to disappear.

The above reasons have been given in detail because they include to a great extent the arguments of all who are supporters of the gastric theory.

On the other hand many reasons are given against attributing to gastric disorder the symptoms of neurasthenia.

It is pointed out that in many, possibly the

majority of ,cases there are no gastric symptoms present

Further it has been provdd as mentioned in the last chapter by Bouvert<sup>e</sup> (5) and Herzog (6) that the chief element necessary for the theory of auto-intoxication, namely absence or diminution of hydrochloric acid is often wanting in these cases; and, as the above investigators found, that the condition may be one of increase of hydrochloric acid.

Again it is pointed out that dilatation of the stomach is frequently searched for in vain in cases of neurasthenia, and on the other hand numerous cases of dilatation of the stomach, due to a variety of causes, are met with where there are no nervous symptoms whatever.

Finally, that in many cases the symptoms of gastric disorder follow, and do not precede those of neurasthenia

Against the second gastric theory mentioned much the same objections may be raised namely that many neurasthenics have no gastric symptoms, and that there are cases of hereditary, or traumatic origin that have undergone no damage to the nutrition of the nervous system.

Supporters of the nervous theory prominent among them Bouveret (7) complain that the gastric theory does not explain the commencement of the dilatation of the stomach, and claim that here the nervous theory must be fallen back upon.

They hold that the dilatation is only a consequence

of paresis of the muscular coat of the stomach, having its point of departure in a morbid state of the nervous system still imperfectly defined. Then supervenes the series of troubles caused by auto-intoxication.

Gastric atony in constant but muscular atony is the result of fatigue and like all muscular fatigue is under the control of the central nervous system. M. Féré (8) in a work of his says, "ALL stimulation comes from without, and is accompanied by a dynamic condition in which all the contractile elements of the organism appear to participate; but soon afterwards supervenes a depression, an atony of these same elements, an atony as profound, as lasting, as the first vibration, the initial stimulation, was strong or long".

Returning to the gastric theory, supporters of it will say. The more noble the tissue, the higher the function, the more fastidious it is as to the quality of the nutrition furnished to it, yet the central nervous system in dyspepsia accompanied by dilatation is worse than badly nourished, it is poisoned, and there is, therefore, nothing astonishing in the phenomena of weakness and fatigue which supervenes as characteristics of neurasthenia.

If we might venture to sum up the two theories mentioned, we should have to confess, that while neither was applicable to all cases, both are correct to a certain extent. The truth lies probably in the combination of both theories. As to whether gastric

symptoms precede, or follow, the general symptoms of neurasthenia, one must confess that many cases are met with where the gastric symptoms preceded the neurasthenic state, in some cases even by a number of years.

We often find that patients brought to a low state of health by gastric disorders fall into the mental and physical state met with in neurasthenia, and we must attribute to the dyspepsia the effects produced, and in treatment concentrate our efforts on curing the dyspepsia, to find frequently that, as the dyspepsia is relieved, the neurasthenic symptoms disappear.

Again, however, cases are met with where the gastric disorder is a mere symptom along with other effects of neurasthenia, where the stomach suffers, along with other parts of the body, from the general neuropathic state.

In these cases the symptoms referred to the stomach follow, sometimes at long intervals, the advent of general neurasthenic symptoms, and treatment directed to the stomach is futile unless combined with remedies suitable to the cure of neurasthenia.

It would be hard to say which of the two classes was the more numerous - probably the later.

Finally cases are met with <sup>which</sup> at no time show any traces of gastric symptoms and are attributable, as mentioned in Chap III, to many causes which bear no relation to the stomach.

Another theory is that of Glénard's (9) who attributed, in 1865, neurasthenia to prolapse or sinking of one or more of the abdominal viscera, or Enteroptosis, as it is called. He maintained that in all advanced cases evidences of sinking of an abdominal viscus was to be found, and that the symptom first to be found was asthenia or weakness, followed by dragging sensations, and feelings of emptiness in the abdomen, and later by symptoms related to the stomach and finally nervous symptoms.

The feeling of weakness complained of was due, he said, to a lax abdominal wall, and the more severe symptoms to displacement of some of the viscera. Recently McCallum (10), writing an article on Visceroptosis supports, in part, Glénard's theory, and mentions that 90 % of the cases of neurasthenia in the female are victims of visceroptosis.

Glénard maintained that dilatation of the stomach was always the consequence of the displacement of certain portions of the intestine with reference to other portions: a displacement to which he applied the term ptosis. He took as his standpoint the normal arrangement of abdominal viscera, or rather what he thought the normal arrangement of the viscera—an arrangement rarely met with. It is impossible to accept this theory as being the true cause of neurasthenia, as Glénard maintained. Granting that in a few cases of neurasthenia enteroptosis exists, especially so in relation to displacement of a kidney, it is impossible to attribute

all the symptoms to this nor is it fair to say that cure of these symptoms is due to treatment of enteroptosis in cases where rest, massage, and attention to diet formed part of the treatment.

On the other hand the number of cases where displacement of some abdominal organ can be made out is very small compared with the number of neurasthenics met with. Even in women the number, according to most observers, is much less than that found by McCallum. And further we meet with cases of displacement of some organ where there are no accompanying neurasthenic symptoms.

Another theory is that suggested by Anjell (11) who, after observing several cases, found that the vasomotor system was more excitable in neurasthenia than in ordinary persons. He found that the vasomotor system reacted in neurasthenics under the slightest stimulation, and did not return to normal as quickly as it ordinarily does on removal of the stimulation.

Weber (12) corroborated Anjell's experiments and attributed most of the symptoms met with in neurasthenia to an alteration in the blood-supply of the nerve centres brought on by slight causes.

Other writers lay stress upon the heredity of individuals suffering from neurasthenia. Arndt (12) thought that, in all cases, there was a faulty development of the nervous system which produced, in time, an atrophy of the nerve elements.

Arndt dissents strongly from Beard when he maintains that neurasthenia is a "purely functional disorder";

and thinks that the only difference between organic diseases and neurasthenia is that in the former the pathology is known, whilst in the latter it is unknown. Whilst maintaining that neurasthenia is essentially of hereditary origin, Arndt thinks that certain injurious influences are able to further and hasten its development. He likens neurasthenia to chlorosis, for as the character of chlorosis is smallness, delicacy, and faulty development of the vascular system, so neurasthenia betokens smallness, delicacy, and faulty development of the nervous system. Many who object to Arndt's views hold that he does not sufficiently discriminate between neurasthenia and conditions which resemble and in a sense are allied to it, and yet not neurasthenic according to the general view of the condition known as neurasthenia.

Wiederhöld (13) believes the cause of neurasthenia lies in deficient metabolism in the nervous system, slow blood changes and venous stasis, brought about through insufficient respiration and weak heart function. As a result of this he thinks that there is an oxygen hunger of the tissues of the nervous system.

Mathieu (14) disagrees with Bouchard's theory of auto-intoxication with dilated stomach and says that he has seen many cases where the dyspepsia came on simultaneously with the neurasthenia. He thinks that the family history has much to do with the development of neurasthenia, and says that invariably a neurotic family history is found upon inquiry, either of hysteria

and epilepsy or insanity, and in a few cases as history of rheumatism gout and diabetes.

Another writer who considers that family development is the main cause of neurasthenia is Lowenfeld(15) who believes that defective development of the blood vessels of the brain is the cause of the chronic cerebral exhaustion met with in neurasthenia .

Clifford Allbutt (16) says, "The attribution of abnormal irritability, or over excitability, to nervous structure in disease is absurd. No nervous matter was ever too excitable. The more excitable our nerves the quicker and higher our life. The fault in neurasthenia is that the vibrations of the sense organs, instead of being absorbed into the larger harmonies of the nervous system take to "short-circuiting", whereby their energy is wastefully dissipated".

In the inherited cases, he thinks the nervous centres are deficient in volume or in blood-supply.

In the case of Traumatic Neurasthenia, the chief point upon which difference of opinion exists, is whether the development of neurasthenia must be put down to the physical injury, and shock produced at the time of the accident, or to the mental shock and impression that the person sustained .

Erichsen(17) who has gone into the subject, while admitting that the morbid anatomy of the primary effect is doubtful, thinks that in time an inflammation of the membranes of the cord sets in. The importance of the actual injury is mentioned by Vibert(18) who



remarks that most cases develop after serious accidents as explosions, and railway accidents, and very seldom after other accidents such as assaults and injuries *inflicted with weapons.*

He thinks that if the mental impression was the main factor in the causation of the neurasthenia, cases would occur equally in both classes of accidents.

In cases where trifling accidents do cause neurasthenia he says that it is invariably in neurotic persons with a predisposition to nervous diseases.

Charcot(19) on the other hand thinks that the mental impression, received at the time, is the main factor, and believes that the majority of persons who develop neurasthenia after an accident were predisposed to nervous derangement. Much the same view is held by Page(20), who, criticising the views of Erichsen, thinks it altogether impossible for the membranes of the cord to be affected. He thinks that the accident causes in most cases a lowering of the general health, and reduces the patient to a state which permits of the development of the neurasthenia, to which he was predisposed.

Some believe that there are molecular disturbances in the nerve elements in cases of traumatic origin which are insufficient to cause a gross lesion, but sufficient to bring about the symptoms found in these cases (21).

Thus traumatic neurasthenia may develop in cases where the actual injury is slight, or perhaps altogether absent. Here the effects must be put down to the

fright and as the mental results of the accident, acting, probably, on a brain already predisposed through hereditary influences to the development of neurasthenia. In other cases there is a visible injury which, if it does not of itself cause the symptoms, will aggravate and keep up the condition. The sudden shaking received in such accidents may bring about molecular changes in the nerve-elements which in its turn causes the neurasthenic symptoms.

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## CHAPTER VII

### NEURASTHENIA :- Prognosis, Complications, and Sequelae.

Neurasthenia is not a fatal disease, nor does it even shorten life; nevertheless it is often very persistent, and many go through life with it, having failed to obtain a cure for it.

In spite of this, however, neurasthenia must be regarded as a curable disease in the majority of cases

The most difficult cases to cure, or indeed to benefit at all, are those where there is strong hereditary predisposition to nervous derangements.

In many the "nerve-capital" is deficient in amount, and cannot be increased by any means at our disposal. In such cases the daily routine must be planned out: the expenditure of nerve-force must be kept within the limits of the supply. Such cases become aware in time of their deficiency, and find that they are unable to stand the strain and stress that other individuals can and if they can afford it, they avoid putting themselves to the test, and manage to go through life with but little inconvenience in spite of the fact that they are continually threatened with neurasthenia.

The onset of neurasthenia is gradual except in traumatic cases and a few other instances. It runs a chronic course and, in spite of all possible treatment, may persist for months, recovering slowly. Others are very changeable, one day being almost entirely free

from symptoms and other days much worse. In giving a prognosis, which should invariably be guarded, many factors must be taken into consideration. The age of the patient, the family history, the duration of the complaint, and the circumstances of the patient.

As to the age of the patient, the prospects are good if the patient is young. Patients below thirty years of age usually recover rapidly under suitable treatment, and soon return to their former condition.

Patients over thirty years of age do not recover so rapidly. After the age of forty complete recovery is rare. Sufferers at this age do not seem to throw off the exhaustion, their tissues seem, as it were, to have lost their elasticity and recuperative powers. In the aged the disease runs a prolonged and intractable course, and often reduces patients to a condition that permits complications to set in <sup>and</sup> bring on a fatal termination.

As to family history, any taint of insanity must be sought for, and if such is found, a grave prognosis must be arrived at. Though much good can be done in these cases, under suitable treatment, relapses are frequent, and the majority of them in time cross over the border, and pronounced mental enfeeblement results.

In cases where mental fears and anxieties are marked the prognosis is usually serious. Allbutt (1) speaking of them says "The patient who can lift his eyes to the future will recover. He whose thoughts writhe in the past is on the broad road to lunacy". It is impossible, however, to read of, and see, the cases

that have recovered under the Weir-Mitchell treatment, and other treatment brought forward during the past ten years without regarding hopefully the prognosis of neurasthenia, except in cases where the family history is markedly unfavourable.

Another point is the duration of the disease, the longer the nervous exhaustion has lasted, the longer the deleterious influence has been at work, the worse is the prospect, and the slower will be the cure.

The other factor to be remembered in giving a prognosis is the circumstances of the patient. This seems a strange thing, but some are too poor to be cured

the expense of carrying out faithfully the Weir-Mitchell treatment is naturally great, and beyond the means of many, who are thus unable to take advantage of the only, in many cases, real cure.

Again, many are, through want of means, unable to leave surroundings and influences that have caused their breakdown; and in these cases the cure, if obtained, is but temporary and a relapse occurs when the patient returns to his former surroundings.

Another point in the prognosis is the certainty of diagnosis of the case. In view of suitable treatment being carried out, it is important that the true nature of the case be known, or else treatment totally unsuitable may be adopted and the cure in this way delayed, and valuable time lost.

The knowledge of the disease Beard(2) says is one half of the campaign.

It must be borne in mind that relapses, due invariably to giving treatment too soon, are liable to occur, and patients should be warned as to the possibility of them.

In traumatic neurasthenia the prognosis is much the same, depending, as Horsley (3) says, on the previous occurrence of serious disease in the patient's life, the occurrence of nerve disease or neurosis, on the severity of the symptoms and on the patient's age.

Another feature of traumatic cases is that the question of compensation often comes in. It is frequently the case, that while litigation is pending, and the uncertainty of the outcome of the case is still present, the symptoms persist; but as soon as the case is settled, the patients begin to improve steadily. In view of litigation it must always be remembered that, while many cases recover completely, there are others where the cure is incomplete, and where patients are left in a condition in which they are unfit to follow their former employment—a condition from which they never recover.

Again the prognosis differs in the different classes of patients, for frequently the prognosis is brighter in the case of the emaciated, weary, and worn-out patient, who can benefit from the Weir - Mitchell treatment while the apparently more active patient, without any considerable physical disorder benefits but little

under it.

Many complications are liable to set in during an attack of neurasthenia. Some of them have already been mentioned. Neuralgias of different kinds are perhaps amongst the most common. Hysteria is met with as a complication, although it can scarcely be said that the neurasthenia state renders a person more liable to become hysterical, as hysteria, as already pointed out, occurs in physically healthy individuals.

Less frequently other complications may arise such as Writer's cramp and Chorea. In these when they occur the neurasthenia undoubtedly acts as a predisposing agent. They are however in the majority of cases, amenable to treatment.

Certain skin disorders, erythemas, urticaria, and such-like skin-troubles are common.

There are certain sequelae of neurasthenia which are important and should be mentioned. Of these, the most important, and probably the most frequent, is Insanity which has already been mentioned. Another is the craving for alcoholic stimulants. It is strange, but nevertheless true, that many persons who were previously temperate, some even teetotallers, after an attack of neurasthenia, become confirmed drunkards. Many successful business men and others, who become neurasthenic, either from overwork or, as is frequently the case, from a bereavement in the family, or bad



speculation, take solace in stimulants and ultimately although cured of their neurasthenia, are left with a far worse malady in the craving for drink. In many the neurasthenia <sup>is</sup> aggravated and thus the craving for alcoholic stimulants is superadded to the neurasthenia, and nullifies any attempt at treatment of the neuropathic state. As an explanation of this relationship between neurasthenia and inebriety Beard mentions that, "neurasthenia causes sometimes a great and incredible tolerance of alcohol; in these cases they can bear immense doses without feeling any effects, good or bad-certainly no bad effects" In this way neurasthenics take alcohol, first with hope that it will act as a tonic to their "shattered nerves", and owing to this tolerance take it in large quantities until, finally, they find that it is a necessity and cannot be done without.

To a lesser extent neurasthenics sometimes give way to the habit of opium-taking. The depressed state, to which they have been reduced by the malady from which they are suffering, induces them, as in the case of alcohol to start this pernicious habit to which they ultimately fall a prey.

The class of patients who take to alcohol and opium is that where there is a history of insanity, where the menal <sup>t</sup> symptoms are prominent, the anxieties and fears. This class of neurasthenics frequently end their days within the walls of an asylum.

In speaking of the part played by disease of the reproductiv<sup>e</sup> system in the causation of the neurasthenia

mentioned that they are, in some, the results rather than the exciting cause, of neurasthenia. This is true, for while, in some cases, an irritating discharge, or other complaint of the reproductive organs, has its effect on the nervous system already predisposed, reducing the strength of the patient, and by its annoyance brings on neurasthenia, in other cases we meet with affections of the reproductive organs which resist all local treatment, and are unaffected until the neurasthenia, which is the actual cause of them, is tackled and cured.

Organic lesions of the brain and spinal cord such as Paralysis sometimes appear as sequelae of neurasthenia, but in such cases it is, perhaps, more correct to regard the neurasthenia as the precursor, or the initial stage of the disease that finally develops.

This view although denied by Beard(4) is supported by many authorities.

Neurasthenia if left untreated for some time tends to drift into hypochondriasis. The anxieties and delusions of patients, although at first merely temporary and removable, become more fixed and permanent.

The most trifling details of their cases are emphasised and trouble them greatly, and they spend their whole time and money going, in vain, from one charlatan to another.

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## CHAPTER VIII.

### THE PROPHYLACTIC TREATMENT OF NEURASTHENIA.

A not unimportant part in the treatment of most diseases lies in the direction of prophylaxis. Especially is this the case in neurasthenia, which, owing to the trend of civilization, threatens to become more wide-spread in our midst every year.

A larger per centage of children enter the world at the present time with a predisposition to neurasthenia than at any previous time, and that per centage is increasing.

Unfortunately there is a class where the hereditary predisposition is so strong that anything, in the way of physical and moral education, has but little effect in stemming the tide of their neurosis: They are doomed, as it were, to fall victim to their inheritance.

But there is another, and fortunately a larger class where the predisposition is not so marked, and which requires the existence of some exciting cause before the individual develops neurasthenia. It is at this class that prophylactic measures must be directed.

Their already small amount of nerve capital must be husbanded and strengthened by every means at our disposal. The forces of heredity are strong, and

the battle is an up-hill one but certainly not quite hopeless, as some would have us believe.

The treatment must start early in life when the children are yet young, and the success or otherwise depends largely upon the parents. Unfortunately the parents of neurotic children are often themselves neurotic, and thus, to a large extent, unfitted to educate and bring up their children so that their hereditary tendencies will be kept in the back ground, and prevented from developing as they otherwise would do. The body, as well as the mind and morals, of the child, must be attended to. The physical health must be ever before the mind's eye, and a sound body made the basis upon which the moral education is to be built.

Taking the physical health first, any surroundings which will tend to act detrimentally upon the child's health must be combatted. The home surroundings themselves in which many children, especially in our cities and large towns, spend the first few years of their life, are frequently anything but helpful to the development of a vigorous constitution.

The smoky air of our towns, where the Sun is but rarely seen, and where it is impossible for children to spend many hours out of doors, compares unfavourably with life in the country, where the air is free from impurities and the Sun be frequently seen, and where the fields permit of the child being out of doors the greater part of the day.

The late Dr H.G.Sutton(1) said,"If living creatures, and especially human beings, the most nervous of them all, are too much cut off from the outer world, there is failure in nervous power, evidenced by weakness of circulation and shallowness of breathing".

Life in the Country, if it is possible, is therefore the first suggestion, in the prophylactic treatment of a neurotic child.

The choice of a school is important in the case of a neurotic boy or girl. As already hinted at, it is rather the surroundings at school that help to bring on the neurasthenic condition that is found in school children than the actual study, and the long hours, in unsuitable schools, where the hygienic conditions are unsatisfactory. As to the advisability of sending neurotic children to boarding-schools, there is some difference of opinion. It has advantages and disadvantages and it is often difficult to say which are the greater.

If the home surroundings are satisfactory, and the influence and example of the parents helpful rather than otherwise, perhaps a day school is more suitable than a boarding school. On the other hand it is often desirable to remove a child from his home surroundings, undue sympathy and harmful, although well meant, solicitude do not help the child to overcome his neurotic tendencies, and the child's removal is desirable. Having decided on a boarding-school

three things should be inquired into and insisted upon, plenty of good food, sufficient hours of sleep, and out-door exercise.

As regards food, unfortunately, that found in many boarding schools is not good enough for growing children. The hours of sleep are frequently insufficient, and sufficient sleep is a 'sine qua non' for the neurotic child if he is to keep up with his studies.

As to out-door exercise, this cannot be insisted upon too strongly, but must be carefully watched lest it be overdone, and carried to the extent of fatigue. Walks in the country, provided they are not too long, are beneficial; gymnastic exercises are helpful and should be encouraged, and such games as football and cricket for boys, and skipping for girls are to be permitted in moderation.

Lastly the moral tone is an important element in the choice of a school, especially of boarding-schools. Often children acquire habits such as masturbation and others at school, which undo any good effects of other measures adopted. Oppenheim (2) thinks that children should be cautioned against masturbation.

In home-life the moral education of neurotic children is important - if not indeed the most important part of a child's upbringing. The example set by parents is an important <sup>determining</sup> factor of the future of the child. Smiles says, (3) "The very sight of a great and good man, is often an inspiration to the

young, who cannot help admiring and loving the gentle, the brave, the truthful, the magnanimous". This is as true of the neurotic child as of any other.

There is a natural tendency for a child to copy in its youth its parents, and the impressions made upon the child's brain during its early childhood invariably remain for good or for evil throughout life.

Force of will and determination must be encouraged and strengthened in the child provided it is led along proper lines, and not allowed to turn into obstinacy and disobedience. The child requires to be praised for his good deeds, and reproved when he does wrong, and if needs be, punished. Wrong-doing should be shunned by the child, not because of the fear of the punishment, but rather out of respect and love for his parents.

There are certain traits of character met with in the neurotic child, such as outbreaks of temper and emotionalism, that must be fought against and dealt with by the parent in a judicious way. Anything, such as gruesome pictures and tales, that appears to frighten children and cause night terrors should be avoided.

An anxious time in neurotic children is that of puberty, when the sexual emotions are stimulated.

It is at this time in the history of many neurotic children that the breakdown occurs or at least



when the seeds of future trouble are sown. If these are to be avoided the child requires careful attention and anything that stimulates the senses, excites the imagination, or arouses the emotions, avoided.

Turning to the adult, we find many measures which if attended to, will prevent the outbreak of an attack <sup>in</sup> of a person predisposed to neurasthenia. These must now be briefly mentioned. They must obey the laws of hygiene and avoid many things which are known to act as exciting causes of neurasthenia.

Avoidance of stress or strain of every kind is imperative. Excitement of all kinds must be strictly avoided and the stress from overwork, intellectual or physical, be evaded. Unfortunately many are unable, for economical reasons, to avoid overwork, and frequently are attacked with neurasthenia, whereas they might otherwise have escaped. The choice of a trade or profession is important in the case of a neurotic man.

Goodhart(4) points out that certain professions, notably the clerical, the medical, and that of dealing in stocks, seem to develop neurotic tendencies.

Von Hossling(5) however, found it far more frequently among merchants and manufacturers than among professional men. Whatever be the choice of the individual with regard to his occupation, he should certainly be out of doors as much as possible, and should not lead a sedentary in-door life.

As in the case of children out door exercise is beneficial, and games, such as tennis and golf are of value, also shooting, rowing, and cycling.

Cold baths are of great service to those whose health permits and, failing this, cold sponging.

Neurotic people should be very abstemious in the use of stimulants and narcotics such as tea, coffee, and tobacco.

Osler (6) mentions the habit of taking at least once a year a prolonged holiday away from the ordinary environment, in the woods, in the mountains, or at the seaside, as being beneficial to those of a neuropathic disposition.

Again, the necessity of sufficient sleep and nourishing food must be insisted upon if the hereditarily disposed person is to keep in check the neuropathic tendency of his inheritance, for, as Spencer says, "It is only by wise management that the imperfections of nature may be diminished." They must ever keep before their minds eye, without dwelling upon it, their limited amount of nerve force and endeavour by all means in their power to increase the energy and resistance of their weakened nervous centres.

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## Chapter IX.

### The Treatment of Neurasthenia .

General Indications:-- In the treatment of neurasthenia there are certain courses of Treatment, <sup>indicated</sup> which are applicable to all cases, and should be borne in mind.

Probably the most important is that the cure of neurasthenia cannot be brought about in a day and often takes weeks, sometimes months, or even years, before the patient is well. While in the majority of cases the physician can assure the patient, that in time, providing the treatment prescribed is conscientiously carried out, he will recover, in many cases completely, it is always well for the patient himself to understand that time is required and he should reconcile himself to the fact that the treatment must honestly be adhered to in all its details for in many cases a lengthened period.

Again, it should be remembered that neurasthenia is not a malady which so much requires drug-treatment as strict observance of the laws of hygiene, and such measures as rest, suitable diet, massage, and electricity. While this is the case, it must, however, be acknowledged that we cannot afford to despise drugs in the treatment of neurasthenia and must often have recourse to them but the part they play in the cure is quite <sup>a</sup> secondary one, Proust (1) thinks that " the employment of drugs

is often one more injurious than useful, that they may, to say the least, counteract the effects of hygienic therapeutics."

As the pathology of the condition consists chiefly in nutritional changes in the nerve elements, the indications are to promote the nutrition of the nervous system through the improvement of the general physical health.

The condition is a constitutional one, and, although symptoms referring to one particular function may be prominent and often the only complaint the patient speaks of, this must be remembered and the treatment, although occasionally symptomatic, must be aimed at the general condition. Success depends indeed, in many cases, on the observance of this fact, for the local symptoms often disappear when, and not until, the general condition is improved.

While this is the case, the causes of the trouble must be sought carefully for, and means taken, if possible, for their removal and this will often help materially in the successful treatment of the condition.

Again the surroundings of the patient, in which the treatment is to be carried out must be carefully enquired into. Life in wholesome surroundings is absolutely necessary for the cure to be brought about. "In vain will the physician apply his remedies if the patient lives in a home if the treatment is to

be carried out at home, which is damp in winter and hot in summer, and which, at all times, is close and stuffy" (2)

Every individual case must, however, be taken separately, and the circumstances and general character of the patient taken into account and treatment adopted accordingly, for, as Beard (3) says, "Each case of neurasthenia is a study of itself. If two cases are treated precisely alike in all the details from beginning to end, it is probable that one of them is treated wrong".

The first essential which must be attended to at the outset, by the physician, is the gain the confidence of his patient; the personal element comes prominently into play in the treatment of neurasthenia and all treatment will prove futile and disappointing if the physician fails to obtain the trust and reliance of his patient. The tale that the patient unfolds, often tedious and amusing to hear, must be listened to attentively and certainly not ridiculed. The medical attendant must show clearly to his patient that he takes a keen interest in his case and that he is as anxious to effect a cure as the patient himself is to find it .

It will thus be understood that upon seeing the patient for the first time, a full and exhaustive examination must be made, even though considered to a <sup>certain</sup> extent unnecessary, as the average neurasthenic is

observant, and quickly sums up to himself his physician's capabilities to effect his cure and above all his desire to do so. This confidence is not to be gained by giving way to the patient, agreeing with him on every point, and lamenting with him on his misfortune, nor is it to be obtained by undue severity, or ironical remarks, for this will quickly lose to him his patient, but rather by judicious reasoning and assurance of his ability with the co-operation of the patient to effect a cure.

Once this confidence has been gained, this mutual understanding arrived at, it is not too much to say that the patient is in the majority of cases on the high-road to recovery, and the task of the physician lightened to no small extent. For, having arrived at, this stage, the physician will be enabled to re-assure the patient, not that his complaints are the fruits of his too vivid imagination but that his complaint is functional, using the word in its widest sense, and not due to some malignant fatal disease that is lurking in his body. He will be able to raise hope in the breast of his patient, and drag him out, almost unconsciously to himself, from the depressed and hopeless state he had arrived at. Matthews Duncan used to say that, "he had cured many patients by telling them that they had no cancer". The physician will now have obtained in a sense the admiration of his patient, who will now in turn listen to what he has to say and endeavour

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to carry out his instructions, believing, as he will, that they will in time bring about his recovery.

We see here an important and striking distinction between the neurasthenic and hypochondriac, for, while the former, although he has his fears, is capable of being re-assured by one in whom he has faith, the hypochondriac has fixed delusions which are immovable.

REST:- If the treatment of neurasthenia could be summed up in a word that would be rest. The natural recovery from fatigue is rest, thus in the normal state after becoming fatigued from any cause during the day a night's rest often restores the individual and suffices to remove that feeling of fatigue. The same holds good to a certain extent in neurasthenia. In most cases this is the first step to take in the treatment of the condition, although some cases demand it more than others, and require a more prolonged and stricter period of rest. All true cases of neurasthenia require it. Whatever function of quality, physical or mental, of the individual, has been over taxed must be allowed an opportunity for recuperation by means of rest. The extent to which this treatment by rest should be carried out varies greatly in different cases. In cerebral cases, due to mental over exertion, absolute rest must be ordered; the patients in these cases should lie in bed and not be allowed to read, write or sew, and in extreme cases they should not even be allowed to feed themselves.

In other less severe cases the rest does not



require to be nearly as strict and a treatment of partial rest may be ordered. For instance, it is advisable for most cases to stay in bed in the morning till noon, having breakfast in bed. They may then be allowed to rise and to rest at intervals on a lounge during portions of the day. In the case of some men it will often suffice if they give up half their daily work, lying in bed in the morning and going to their business about noon and again retiring early to bed. There are, however, cases of neurasthena where rest is contra indicated:—any case, which has been caused by bereavement or sorrow of any kind requires to have his time more or less occupied, short of fatigued, in order that the patient's thoughts may be directed from his sorrow. If rest is indulged in, in these cases, they merely brood over the cause of their breakdown and fall into a depressed and hopeless state.

Thus the line of treatment regarding the requirements of rest varies so greatly that it is impossible to lay down fixed rules. Each individual case must be decided on its merits. While advocating rest for the majority of cases BEARD\* (4), after giving examples where the alternatives of rest and employment are indicated, mentions that, "The hygiene of nervous diseases has three gospels — rest, work, and change of work".

The advantages derived from rest are manifold, and have been amply demonstrated by most observers. The already overburdened functions and nervous centres

are allowed time to re-cuperate by being kept in a state of inactivity. It is important that the mind should be at rest as well as the body and often this can only be attained by turning the current of a patient's thoughts in other directions, and thus we see the importance of having ~~the~~ <sup>a</sup> suitable nurse in attendance on a case of neurasthenia. She must be of a kind disposition and yet determined, in order that the treatment may be faithfully carried out, and must not yield to every little whim the patient may have. The conversation with her patient must be of a cheerful nature and must on no account turn in the direction of the patient's ills and troubles. A nurse, with sound judgment, tact, of kind disposition, and healthy physically and morally is an essential in the treatment of neurasthenia.

In speaking of the advantages of enforced rest Weir-Mitchell, (5) whose experience in the treatment of neurasthenia has been undoubtedly, greater and more successful than that of any other, says, "From a restless life of irregular hours, and probably endless drugging, from hurtful sympathy and over zealous care, the patient passes to an atmosphere of quiet, to order and control, to the system and care of a thorough nurse, to an absence of drugs, and to simple diet!"

As improvement takes place the treatment is relaxed and although for the first period, varying in length as the case demands, absolute rest is

prescribed, in time the patient is allowed to sit up, and finally get up for a short time until he only stays in bed for a few hours during the day. Rest, important as it is, is however not sufficient to effect a cure, and if employed alone has more disadvantages than advantages. It requires other means added to it such as massage and electricity. Weir-Mitchell <sup>5</sup> (5) points out, "Let us think, then, when we put a person in bed, that we are lessening the heart beats some twenty a minute, nearly a third; that we are causing the tardy blood to linger in the by-ways of the blood-round, for it has its by-ways; the rest in bed binds the bowels, and tends to destroy the desire to eat; and that muscles at rest too long get to be unhealthy and shrunken in substance!"

It must be borne in mind that perfect rest is unattainable while insomnia exists, and the efforts of the physician must be directed towards curing the insomnia before hoping for good results from treatment. Regular sleep is of the first importance. The measures advised to be adopted in these cases will be mentioned later.

#### DIET:-

This is an important factor in the treatment of neurasthenia, and attention should be paid to it. Most authorities, whether they agree with the gastric theory or not, insist on regulating the dietary table of their patients. In cases where there is no ~~\*\*\*\*\*~~

history of gastro-intestinal trouble, some observers think that patients should be allowed to continue their usual diet, providing they do not use too freely fermented liquors. Proust(6) in speaking of this variety of cases, says, "In these cases the best plan is to let the invalid follow the diet to which he is accustomed! They find the regulation of the diet affords these cases a pretext for new hypochondriacal preoccupations. In most cases of neurasthenia the appetite is poor, and digestion not properly carried out. In such cases it is best to begin with a low diet and gradually increase it until the patient is taking an apparently abnormally large amount of food. YEO(7) says "In case of entire loss of appetite, or anorexia nervosa, it is best to begin with an absolute milk diet! Skimmed milk only should be used, and at first in quite small quantities at a time. As soon as a tolerance of the diet is established, four ounces, warm or cold, increasing to eight or ten ounces should be given every two hours! Playfair (8) advises much the same method of treatment. He says, "at first 3 to 4 ounces are given at each feeding, but in a couple of days or so the amount is increased to 8 or 10 ounces, at intervals of 3 hours, so that within 3 or 4 days the patient is consuming 2 or 3 quarts of milk within the 24 hours! Other authorities Bouchard and BOUVERET, for instance, think that 3 meals a day are sufficient, believing that by this means the stomach gets prolonged periods of rest

and comes into a fit condition for the reception of new food. The meal taken in the morning should be substantial, because if little breakfast be taken that feeling of fatigue and lassitude comes ~~in~~ on in an hour or two. It is important that the diet should be varied from time to time, and articles of diet chosen which are readily assimilated and contained as large an amount of nourishment as possible. Milk and fish and white meat generally can be taken. Red meat like beef and mutton is also good, some give it devoid of fat and fibrous portions, other writers, especially Beard and Weir-Mitchell recommend the use of fat. Vegetables which have been cooked such as french beans, and peas, spinnach, and asparagus, are recommended (9) Uncooked vegetables -lettuces, cucumbers, radishes, and mushrooms, should be prohibited. Most fruits can be taken, especially pe<sup>ar</sup>s and apples if stewed. Tea and coffee are only to be permitted if taken with a large quantity of milk.

Mitchell (10) recommends a raw beef soup as being an excellent article of diet in cases of neurasthenia. Butter and eggs are allowable. With regard to bread many patients find it difficult to digest. INsuch cases care should be taken to get old bread and to toast it well. In cases where milk is objectionable SINKLER (11) advises the addition of Vichy or other carbonated water, also Koumiss may be tried. As to the amount of liquids that it is advisable that neurasthenics should drink, there is some difference of opinion, for, whilst some think it

advisable that a large quantity of liquid be drunk, others think that the amount should be limited.

Most writers agree that in the large majority of cases alcoholic beverages should be prohibited, as neurasthenics too readily succumb to the stimulating effects of alcohol and frequently in time take too freely of it. In cases where gastro-intestinal atony is marked great care should be exercised with the patient's diet and although the amount taken should be small at first, it should be slowly but steadily increased. In cases where there is hyper-secretion of acid liquids which are likely to increase this flow of hydrochloric acid should be avoided. Eggs can be given and meat if well cooked milk and water advisable. In the few cases, where there is a history of gout, the diet should be somewhat restricted and fats and carbohydrates entirely prohibited, and white meat given in preference to red meats. Water in fairly large quantities is allowable but wines beer, and other alcoholic drinks should be avoided.

The diet of neurasthenics patients is therefore important care should be taken that the meals come at regular intervals and that plenty of time be taken over them. Most authorities agree that food should be given at short intervals. Nothing should be taken for an hour or two previous to going to bed; and in all cases, although only a small quantity must be taken at first, efforts should be made to increase the quantity of food. Patients should be over-fed rather than under-fed. This is rendered possible, and the

digestion helped by means of massage, electricity, and exercises.

#### MASSAGE:-

The evil effects, which are caused by the enforced rest, and over feeding, are counteracted by means of massage: and in most cases where patients are kept in bed a course of massage is essential. The massage is usually not commenced for the first few days. At first ten minutes or a quarter of an hour once a day is sufficient and should consist of rubbing gently the whole body starting with the feet and ending up with the trunk. It should be done every day, and the time of its operation increased until the patient has an hours massage daily. PLAYFAIR (12) advocates that it should be carried out for an hour and a half night and morning. At first many complain that they are unable, owing to hyperaesthesia, to stand the massage. In time, however, they feel no pain through its use. It is essential to have a person who understands and has had experience in it. There are several distinct movements comprised under the term massage, such as 'effleurage', or stroking with the palm of the hand in an upward direction; another is 'petrissage', when a portion of the muscle is taken between the fingers and thumb, rolled between the fingers, and gently squeezed; another is 'tapotement', where the part is percussed with the tips of the fingers; and lastly there is 'friction', or rubbing the surface with the tips of the fingers. It is essential that the

different parts of the body be successively dealt with; the feet and toes are usually started with, then the limbs and finally the back and trunk generally. The hand should be dry and most physicians prescribe the treatment without the intervention of oil or liniments. Massage of the abdomen is advised by J.K.Mitchell(13).

The different parts of the colon are taken successively. This often relieves obstinate constipation.

The advantages of massage are many. It exercises the unused muscles without the expenditure of nerve-force by the patient. The cutaneous circulation is improved. It often promotes sleep, and relieves constipation; nutritive processes are hastened; and it helps in the disintegration of elements unfavourable and useless to the organism. It permits of the overfeeding adopted in the treatment of neurasthenia . It has also, some say, an indirect effect upon the heart. Important and helpful as massage is , it must be remembered that it is not the most important part of the cure and without enforced rest and overfeeding it is useless. When the patient is allowed to get up the time for massage is shortened; and soon it may be discontinued altogether.

It acts better in some cases than in others. Perdigo(14), speaking of general massage says, " It is useless in those cases of neurasthenia that are well nourished because it predisposes to an exaggerated morbid excitability. In the asthenic cases, if carried out skilfully, good results are obtained."



Patients generally gain in weight under massage. Playfair states that <sup>when</sup> his patient fails to gain in weight he suspects the masseuse is not doing her work thoroughly. J. K. Mitchell(15) made examinations of the ~~urine~~ <sup>blood</sup> before and after massage, and found, in almost all cases, that there was a large increase in the number of red corpuscles per cubic millimetre and a slight increase in the amount of haemoglobin.

Dr. Wharton Sinker(16) has proved that in most cases there is a rise of temperature after massage.

The treatment already advocated, namely enforced rest, Overfeeding, and massage has been combined with seclusion and adopted by S. Weir Mitchell, and has come to be known as the Rest-cure or Weir Mitchell's cure. The method adopted is fully described in his book on the subject(17). This method has been introduced and adopted in this country by W.S. Playfair. Although the different methods had been tried many years ago separately, they had never before been combined.

From this time a new era set in, in the treatment of neurasthenia and the main success that has been obtained in the treatment of neurasthenia has been by the adoption of this method. Seclusion is necessary in most cases, as it is impossible to carry out this treatment with any hope of success at the patients' home, for, as Mitchell (18) says, "It is needful to disentangle them from the meshes of old

habits and to remove them from contact with those who have been the willing slaves of their caprices". They too readily succumb to their ills, and are prevented from getting well by the well-intentioned but harmful sympathy of their friends at home. It is essential, as already pointed out, to have a suitable nurse in attendance, and the medical man must deal firmly, although kindly, with his patient. His visits must be regular but not too frequent, and he must on no account answer to every call his patient may make for his attendance, between his customary visits.

The method is not suitable for all cases, and a careful selection must be made before adopting this treatment, or failure will be the outcome. Mitchell says, "That, as a rule, the worse the case, the more emaciated, the more easy to manage, to control, and to cure".

Some cases of floating kidney do very well under this treatment, and prolonged rest is probably far more effective in replacing the organ than attempts at fixation.

Cases with a tendency to hypochondriasis and melancholia do not benefit under this treatment and should on no account be submitted to it.

The cases that succeed best under this treatment are emaciated women who are reduced to this state from innutrition. Cardiac and gastric cases also frequently derive great benefit from this method of

treatment and rapid heart action, rather than being a bar to its adoption, is calmed and benefitted by it.

The details of treatment ~~are~~<sup>is</sup> set out in Mitchells book. "Fat and Blood" must be carefully attended to and carried out if success is to be the result. No half measures will do. The patient must also submit willingly to the treatment. It generally succeeds better in cold weather than in the summer. Burkhardt (19) also says that, if the patients are to succeed by Weir Mitchells treatment, they must have some understanding of the end aimed at.

The duration of the rest treatment varies according to the individual. Eight weeks may be said to be an average. For the first month or so the patient is not to sit up, afterwards she (the majority of cases are women) can sit up, and in two weeks later, may go out a little if all goes well. The patient may be allowed after eight weeks or so to see her friends and go about as usual. In extreme cases treatment may be required for three, or even six months.

The great disadvantage of this method of treatment is its expense. Many patients are unable to ~~aff~~ afford the necessary time and money.

Mitchell in some cases adopts a modified, or partial rest, method of treatment. He draws up for these cases a detailed schedule of the day which the

patients must follow. The cases for whom the partial treatment is suited are according to Mitchell (20) himself " Milder forms of neurasthenic diseases " where patients are unable to give up their whole time to the full rest-treatment.

The following table taken from J.K. Mitchell shows the systematic way the full rest treatment is carried out:-

Miss A.B.

7 a.m. Cocoa. Cool sponge-bath with rough rub and toilet for the day.  
 8 a.m. Breakfast, with milk. Rest one hour after  
 10a.m. 8oz. peptonised milk.  
 11a.m. Massage  
 12noon. 8oz. milk or soup. Reading aloud by nurse, half an hour.  
 1-30p.m. Dinner. Rest an hour.  
 3-30p.m. 8oz. peptonised milk.  
 4 p.m. Electricity.  
 6-30p.m. Supper, with milk. Rest an hour.  
 8 p.m. Reading aloud by nurse; half an hour.  
 9 p.m. Light rubbing by nurse with drip-sheets.  
 3oz. malt extract with meals; tonic after meals.  
 8oz. peptonised milk with biscuit at bedtime, and a glass of milk during the night if desired.  
 Laxative (cascara), 10 to 30 drops, occasionally.  
 Later, Swedish movements are added after the massage.

Hydrotherapeutics are often helpful in the treatment of neurasthenia, but must not be relied on alone, and must be used in conjunction with other remedial measures. Much can be done in this direction where it is impossible to carry out the Weir Mitchell treatment, and where treatment has to be done at the patients home. This method of treatment is, however,

more satisfactorily and systematically carried out in one of the many sanatoria where these methods are followed. Care must be taken in subjecting patients to both extremes of temperature; mildest measures are best.

There are various methods which are applicable, as, the wet pack, with or without friction; cold sponging, tepid baths and cold showers. Some adopt salt baths. In the case of Turkish and Russian baths Beard(21) points out that they frequently seem to do harm owing to patients staying too long in the hot room. Heat is advisable for some cases and cold for others. Ice bags and hot water bags are often useful in spinal cases and where there are painful parts. Where patients are able to move about it is advisable that they should walk in order to favour reaction. The headache of neurasthenia can often be relieved by the cold shower or spray. In cases of sexual neurasthenia many observers have obtained good results by means of sitz-baths, either warm or cold. These relieve many of the symptoms, such as frequent erections, and impotence. Care must be taken in these cases and patients not subjected too suddenly to extremes of temperature. Baths, provided they are not too cold, can be recommended to most neurasthenics.

Cases are met with that become worse rather than better by hydrotherapeutic measures. In such cases the treatment should be immediately stopped.

Electricity---Most authorities adopt some

\*

methods of using electricity in the treatment of neurasthenia, but their views as to its importance vary considerably; for while Mitchell(22) regards electricity as the least necessary part of the treatment, Jacoby(23) says " Of all diseases of the nervous system, this is the one in which physical methods of treatment alone deserve prime consideration; of these methods electricity plays chief part " .

In adopting this method of treatment two things should be borne in mind, first, that the treatment should be carried out by a skilled operator who thoroughly understands the methods of applying it, <sup>and</sup> ~~for~~ it should not be trusted to unskilled hands and, second, <sup>ly</sup> that strong currents should be avoided. Electricity affords a means of passive exercise to the muscles. It seems to have a general tonic effect upon the system, and influences the nutrition of the tissues.

Various <sup>plans</sup> ~~plans~~ are possible for the application of electricity:-A slowly interrupted, mild foradic current to the muscles once a day is frequently used. When this has been in use for about fifteen minutes the rapidly interrupted current is used, placing one pole in the nape of the neck and a large electrode on the soles of both feet. Mitchell(24), after a number of experiments found that the temperature of the body was raised after half an hour's treatment of the muscles in this way.

Beard(25) found that application to the head

gave the best results in the galvanic treatment of the central nervous system. A helmet, was put (X) over the head, lined, (X) with some soft conducting material after thoroughly wetting the hair. To this ~~was~~ attached the positive pole while the negative is applied to the pit of the stomach, and a current passed, varying from five to fifty milliampères.

Treatment by electricity must not be carried on uninterruptedly for too long a period: six weeks is sufficient. The use of hydro-electric baths is sometimes resorted to. The localized breeze and spray applied to single parts especially to the head and spine, are useful.

Good results are said to have been obtained by the D'Arsonval method of applying the high-frequency current.

The functional impotence of neurasthenia has been treated and benefited by franklinization of the spine or galvanization of the lumbar region of the spine or faradization of the genitals and surrounding parts.

It is not advisable to employ electricity indiscriminately in all cases of neurasthenia for as Jacoby (26) says "Under all circumstances should it be remembered that fresh delusions may easily be implanted upon a physically disordered brain, and electricity is one of the agents most capable of doing so".

It would perhaps not be inappropriate to mention here the part played by the psychological influence

of the different measures adopted in the treatment of neurasthenia. There is without doubt such psychic influence in many of the methods adopted but especially in electricity. Patients are generally very willing to try electricity, the mystery attached to it, and the imposing apparatus frequently used with the production of sparks seem to impress the patient forcibly who thinks that something powerful is being done and gains confidence. Mobius (27) even estimates that four-fifths of the successes obtained by electro-therapeutics are due to the suggestive action that the use of it exerts in the patients' minds. Other observers seem to minimise the psychological influence of these methods. It is certainly hard to say how much must be attributed to suggestion and how <sup>much</sup> to the actual treatment; but that suggestion plays a part, whether great or small, in the majority of cases, is incontestable. We must remember that most cases are of an impressionable temperament owing to their enfeebled condition, and while this enables the physician to influence them by restoring their lost courage, raising hope within them and in endeavouring to remove their delusions and imaginary troubles, we must bear in mind that this same factor renders them liable to depressing influences, and sometimes makes them a prey to charlatans and quacks.

Some authors claim that good results have been obtained by hypnotic influence. When good



results have been obtained, they have been only temporary for after a short time the neurasthenic condition easily returns. Little hope of permanent cure can be held out by means of hypnotism, and it is possibly advisable in many cases to keep neurasthenics from its influence.

**Drug-treatment:-** The part played by drugs in the treatment of neurasthenia is quite a subsidiary one; some authorities indeed dispense with them entirely beyond the use of a mild laxative for the relief of constipation. Drugs, however, if given judiciously and their effects closely watched, are able to help in the treatment. Many drugs have been tried; the most effective perhaps is arsenic. Clifford Allbutt (28), thinks arsenic invaluable in the treatment of neurasthenia, given in gradually increasing doses until five minims of Fowler's solution is being taken thrice daily. In anaemic cases the arsenic may be given combined with iron. Quinine combined with iron is also useful in certain cases; the iron improves the blood, whilst quinine decreases the excitability of the nervous system. One to two grains of the Sulphate of Quinine may be given daily and the treatment extended over a prolonged period. It is, however, not advisable to give quinine in cases where the gastric secretion is not sufficiently acid. Many still hold that benefit may be derived from the use of the so-called nerve-stimulants, such as Valerian, Assafoetida.

Geo (29), recommends giving valerian in the form of the ammoniated tincture, or combined with Zinc-valerianate of Zinc in two grain-pills twice or thrice daily.

The Bromides, if given carefully, are of undoubted service in the treatment. Sodium and ammonium bromide are better perhaps than Potassium bromide. They may occasionally be used in the treatment of the insomnia of neurasthenia; but other methods should be adopted before having recourse to the use of hypnotics, for, once they are begun, it is often hard to stop them. Massage, Warm baths, Wet Pack, or Light nourishment, at bedtime will often induce sleep and should be tried in all cases. Failing these measures, perhaps ten to fifteen grains of sodium bromide will suffice, and it is preferable to most hypnotics. Occasionally other hypnotics must be employed and perhaps Sulphonal is the best. They should be given an hour or two before the time of sleep. Some use *Paraldehyde* in dram doses. It is sure but exceedingly disagreeable to take, and leaves an unpleasant odour in the patient's breath. If bromides are given, it should be in small doses and for brief periods, occasionally however large doses are advantageous but should not be continued for long.

Wharton Sinkler (30), thinks that of the bromides strontium bromide is the least objectionable. It has a less harmful action on the stomach and seems to be less depressing than the other salts of bromine, Trional in ten grain doses may be tried.

One might almost say that Opium should never be used in the treatment of neurasthenia. The occasions which demand it are very rare, and the dangers of its use are great. If it must be given at all, it should be in pill form.

The constipation present in so many cases must be relieved. A saline mixture of carbonate and sulphate of magnesia given in the morning before breakfast often suffices. Many give aloin in tablet form. Hunyadi Janos and Carlsbad salts are often effective and convenient. Proust(31), does not think it advisable to give saline aperients owing to their tending to induce to secondary constipation, and prefers such drugs as rhubarb, castor oil, and podophyllin. Enemata may be ordered in some cases with advantage.

In gastric cases recourse must be had to alkalies and acids as the case demands. The drug that should most commonly be used in the gastro-intestinal atony is hydrochloric acid. It helps the gastric secretions and should be given in a large quantity of water.

In cases of hyperchlorhydria the alkalies are useful - bicarbonate of soda in large doses after food.

Strychnine in large doses must certainly be avoided. The hypophosphites of Lime and Soda are useful.

*Hyoscin* is occasionally of service where there is great mental agitation, as also is Caffeine.

Basing his treatment on the auto-intoxication theory Starr(32), advises the use of antiseptic drugs such as Sulpho-carbolate of Soda in five grain doses with Permanganate of Potash ~~xxx~~<sup>one</sup> grain doses, also Salol and Sodium Benzoate and Beta-naphthol. These he protects in shellac-coated capsules so as to restrict their effect to the intestine.

There are certain methods of treatment which have

been carried out by (certain) individual investigators with success, but which have not been generally adopted. They should perhaps be mentioned briefly.

Browne(33), advocates the treatment of neurasthenia by hypodermic *transfusions* of the chloride, phosphate, and sulphate of soda, and claims to have had good results from it.

Mendel(34), has obtained good results by Intravenous medication. Several arsenic preparations were given in this way, notably atoxyl. About one grain is injected in a fifteen per cent solution and gradually increased to 3 or 4 grains. At first injections were made every other day, then two injections each week, and finally only one a week. Another method of treatment is that adopted by Constantin Paul(35), he claimed to have obtained good results from the injection of glycerine extract of the grey matter of sheep's brain. He points to especially good results in cases of *cerebro-spinal* and male genital neurasthenia. The first effects of injections being a return of natural sleep, and improved appetite.

Lastly, after the treatment is over, it is advisable to get the patient away for a change of air and scene, so as to complete the cure. It must be remembered that patients should never be sent away when still suffering from insomnia and lack of appetite. The choice of place need not trouble the medical adviser very much as it is not for the benefits of any waters of which health resorts boast, but rather to remove patients from their surroundings: in some cases from the exciting cause of their break-down, and in order to be free from family cares and worries. Wherever they are sent, it is essential that they should spend as much time as possible in the open air. A sea voyage often serves the purpose. Over stimulating climates and the extremes of climate should be avoided. Patients do best in temperate climates.

In the heat of summer the country among the mountains is more suitable than resorts close to the sea. No greater mistake can be made than ~~this~~<sup>to</sup>, as some medical men unfortunately do, transforming a patient into a tourist, rushing about from place to place.

Again it should be borne in mind that the change of air and scene will do the patient no good if he is uneasy or worrying about his family affairs.

Everything should be put right, and the care of the children during his absence assured. It is essential that the patient have a companion who should be bright and cheerful.

If the above suggestions are attended to, and every provision for comfort made, the change of scene and

~~and~~ the new and agreeable impressions that he receives will impart to him a new view of life, and he will return cheerful and hopeful, ready to take up anew his duties in whatever sphere of life fate has placed him; and if he be judicious will lead a careful and in every sense abstemious life and thus remain free from the distressing symptoms of neurasthenia .

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