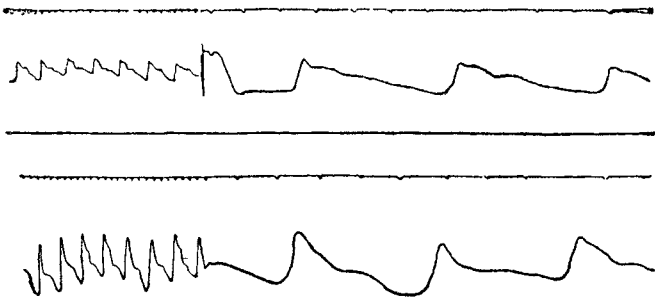


attention—viz., those of high tension where the heart is beginning to fail, and such symptoms as irregularity or intermission of the pulse, giddiness, inability for exertion, shortness of breath, and even œdema of the ankles, are beginning to make their appearance. In such cases cardiac tonics, such as strophanthus, digitalis, strychnine, and

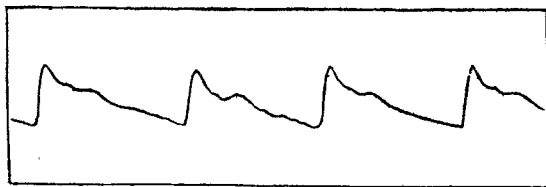
FIG. 21.



Pulse tracing showing the effect of massage and graduated movements. Each tracing is taken partly with a slow and partly with a quick movement of the sphygmograph. The upper shows high tension and a feeble heart; the lower shows less tension and a stronger heart. These tracings I owe to the kindness of Dr. Gustav Hamel, to whose treatment I had recommended the patient.

caffeine, require to be combined with vascular dilators, whilst rest, comparative or absolute, must be insisted upon as more important than any medication. Distension of the stomach by flatulence seems to increase the pain in angina in two ways by tilting the heart and thus causing mechanical interference of the circulation and also by reflex action

FIG. 22.



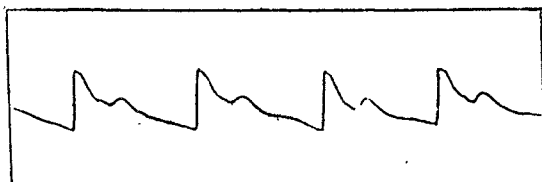
A sphygmographic tracing from the pulse of a healthy man before taking a purgative. The somewhat oblique rise, slow descent, and comparatively slight dichrotism of the pulse wave indicate that the arterial tension is moderately high.

through the vagus (Fig. 24). Frequently patients are greatly relieved when they are able to pass flatus. I find a very useful mixture for such cases is:—

- Liq. trinitrin., ℥ ss.-ijj.
- Spt. ammon. aromat., ℥ xv.-3j.
- Spt. æther. co., ℥ v.-x.
- Spt. chlorof., ℥ v.-x.
- Tinct. cardamom. co., ℥ x.-xxx.
- Aq. menth. pip., ad ʒj.

This draught may be repeated every quarter of an hour till relief is obtained or until the trinitrin causes giddiness. When the pain is very acute inhalation of nitrite of amyl is the quickest means of relieving it, but in some cases it fails and then an inhalation of chloroform may be used.

FIG. 23.



A tracing from the same person after the use of a purgative. The more abrupt rise and quicker fall and decided dichrotism of the pulse wave, as well as the greater frequency of the pulse as indicated by the shortness of the waves, show that the tension in the arteries is much less than in Fig. 22.

The easiest way to give it is to pour a few drops upon a piece of blotting-paper at the bottom of a tumbler and let the patient take it himself. As soon as it begins to take effect the hand falls and the inhalation ceases. The inhalation of iodide of ethyl sometimes answers, but it is more generally useful in spasmodic asthma than in angina pectoris. In some cases recourse must be had to subcutaneous injection of morphine, and although this may not be altogether without risk it must be remembered that the question is not one of absolute but of comparative risk. The patient

is liable to die from the attack at any rate, and in all probability the injection of morphine will not only relieve his pain but give him a better chance of life. Even when death occurs after the injection of morphine, as it sometimes does, it is to be remembered that the patient would in all probability have died without the drug and unless the dose was so large as to be dangerous in itself any untoward results are to be ascribed to the disease rather than to the remedy. Where the pain is excessive even morphine may fail but in those cases the administration of chloroform subsequent to the injection will sometimes relieve. The chloroform anæsthesia passes into the morphine narcosis, pain is relieved, and danger to life may be averted for the time, although in such cases where the severity of the disease is so great a subsequent attack after a very short interval may prove fatal. But distressing as angina pectoris is a still more distressing condition is that of some cases of paralysis where the patient is unable to help himself or even to express his desires or wants and becomes a burden both to himself and to others. Medicine

FIG. 24.

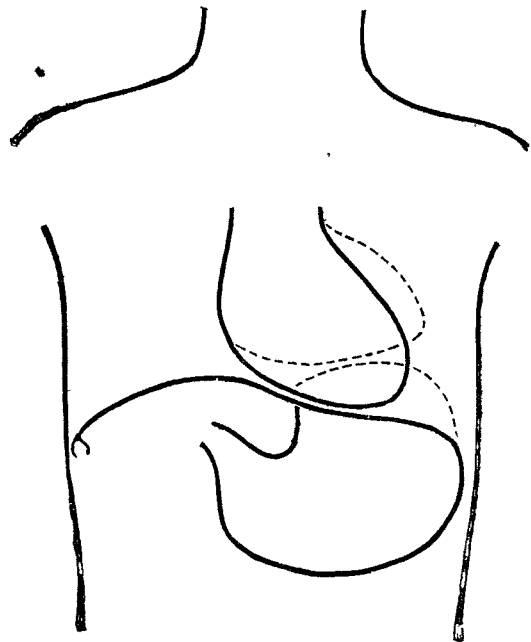


Diagram to show the effect of flatulence on the heart. The heavy lines show the normal position of the viscera. The dotted lines show their position when the stomach is over-distended.

is of little avail when such a condition has actually occurred and therefore it is that the routine examination of blood pressure in all cases, or at any rate in all patients above middle life, is so necessary. For it is only by taking it in time that high tension may be prevented from producing vascular disease and thus preserving the integrity of the brain and mental functions, of averting painful attacks of angina pectoris, and not merely prolonging life but of lengthening the period of bodily and mental activity.

## TWO CASES OF MULTIPLE RODENT ULCER:

WITH A NOTE ON THE POSSIBLE RELATIONSHIP BETWEEN MULTIPLE RODENT ULCER AND EPITHELIOMA ADENOIDES CYSTICUM OF BROOKE.

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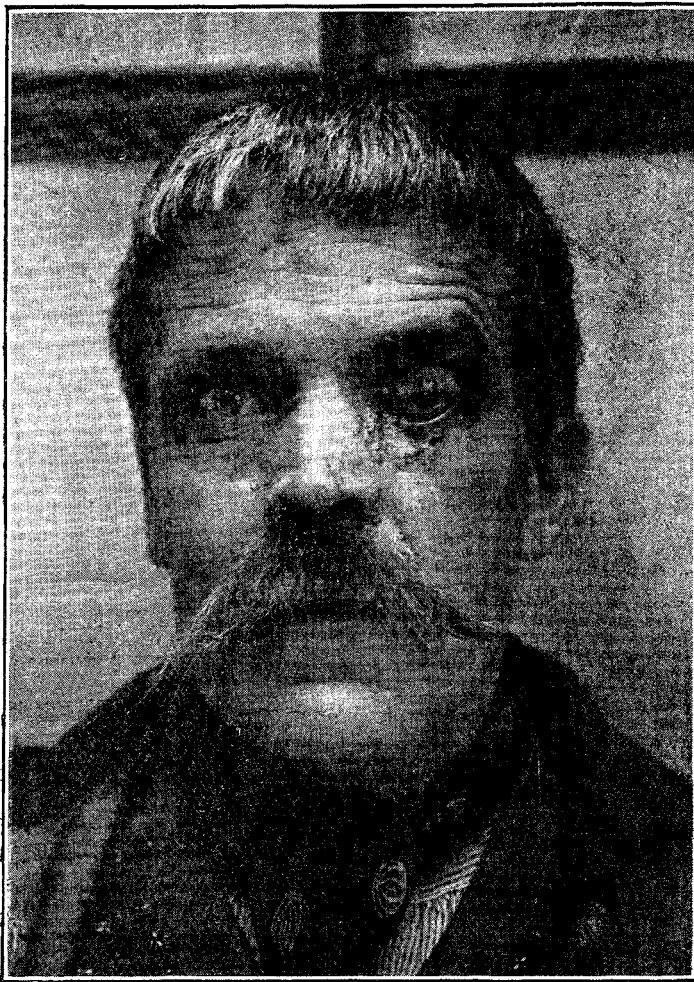
THE objects of this article are: (1) to report two cases of multiple rodent ulcer, each with an unusually large number of lesions; (2) to recall three closely similar cases which have been recorded as examples of Brooke's epithelioma adenoides cysticum; (3) to enumerate the more typical of the published cases of Brooke's epithelioma adenoides cysticum and to point out the characters which distinguish them clinically from cases of multiple rodent ulcer; and (4) while clinically differentiating the typical examples of Brooke's epithelioma adenoides cysticum from multiple rodent ulcer

to call attention to the strong resemblances in the histological features of these two affections.

I. *Two cases of multiple rodent ulcer with an unusually large number of lesions.*—Cases of rodent ulcer in which there are two lesions, or even three, are not very rare. Bowlby, among 66 cases, met with two which had two lesions. Crocker says that he has seen two ulcers twice and three ulcers once. Dubreuilh, among 110 cases, saw three cases each with two ulcers and one with three. Dubreuilh also records a case with four lesions and another with five lesions, Colcott Fox one with five, and Bowlby one with seven. I am unable to find any case, reported as rodent ulcer, with more than this number of lesions, but in the two cases which I am about to relate there were 20 or more in one instance and 13 in the other.

CASE 1. *Mr. W. Bruce Clarke's case.* (This case was demonstrated by Mr. Bruce Clarke at a meeting of the Clinical Society of London on April 24th, 1903, and the following report of the case is printed in the Transactions of the Clinical Society, Vol. XXXVI., 1903, p. 271.) (Fig. 1.)

FIG. 1.



—“Daniel C., æt. 37. History of condition. 2½ years ago he first noticed a small red spot near the outer canthus of the left eye, which gradually grew in size. Seven months later a second spot occurred near the outer canthus of the right eye and increased slowly in size. At about the same time another ulcer appeared on the forehead above the right eyebrow. This one has healed of its own accord but has left a scar exactly similar to the scarring which has occurred round the ulcer underneath the eye. There is another ulcer on the inner side of his nose and one on the under lip, and another on the side of his neck; but he cannot give any accurate account of the dates at which these appeared. *Present condition.*—In addition to these six patches which have been already described there are numerous pimples on his face. They vary from the size of a millet-seed to that of a split pea. As many as 20 or 30 of these can be easily counted. Were it not for the fact that he states the ulcerated patches all began with simple pimples they would perhaps barely deserve attention as they have the appearance of small sebaceous glands in which the ducts are blocked. Two of these pimples have been excised and examined microscopically, as well as pieces from the six ulcerated patches above alluded to. They one

and all exhibit the microscopical appearance of typical rodent ulcers and are displayed under the microscope. The patient is now undergoing electrical treatment with x rays four times a week and is deriving considerable benefit from it. The ulcers are healing rapidly. N.B.—The patient remained in hospital about six weeks after he was shown, during which time the ulcers completely healed; but the pimples, though they improved and diminished in size, and in some instances entirely disappeared, had not altogether vanished. The patient declined to remain any longer.”

Later, the patient was again in the hospital and many of the lesions were excised and others were scraped. In 1907, by the kindness of Mr. Bruce Clarke, I had an opportunity of seeing this patient. There were then altogether 17 lesions upon the face, varying in size from small nodules of the dimensions of a pin's head up to ulcerated lesions of one and a half inches in diameter. There were also scars marking the excision or scraping of former lesions. For purposes of description the lesions then present may be divided into groups as follows:—

1. Six nodules, reddish in colour and semi-translucent, of the size of a large pin's head to that of a millet-seed, and distributed over the left cheek and the forehead.

2. Nodules of the size of a millet seed to that of a split pea, dull red in colour, raised, but flat on their surface, firm, and semi-translucent; a group of three upon the right temple at the outer angle of the orbit; two just below the left ala of the nose; one on the left upper eyelid; and one on the left brow.

3. Larger lesions, which have undergone treatment on a former occasion; two on the forehead; one on the left ala of the nose. These were from a quarter to half an inch in diameter, with a central scar and a marginal rolled edge. (The photograph was taken before these had recurred and shows scars only at these points.)

4. An irregularly shaped lesion, partly scarred, partly ulcerating, and partly crusted, extending from the inner canthus of the right eye on to the right cheek, here and there showing a raised nodular edge. This lesion measures 1½ inches in length by ¾ inch in diameter.

5. A similar ulcer, 1 inch by 1½ inches, involving the inner canthus on the left side, the lower lid, and the left cheek.

6. About the forehead and cheeks there are scattered a few milia, but there are none on the lesions themselves.

*Histology.*—From time to time lesions from this case have been examined microscopically and the typical appearances of rodent ulcer have always been found. In a section of one of the larger lesions, kindly lent to me by Mr. Onslow Ford, there are large masses of cell growth in the corium quite characteristic of rodent ulcer. They present a marginal palisade layer of oval cells and the body of the mass is made up of irregularly oval cells with deeply staining nucleus and with scanty and badly staining protoplasm. Here and there in the masses there are cavities or cysts containing broken-down cell débris. The cell masses are separated from one another by a highly cellular connective tissue and towards the margin of the growth there are here and there large collections of plasma cells. Sections from a small nodule were made by Mr. L. Noon and some drawings from these sections are reproduced in a paper by him in the *Journal of Pathology and Bacteriology*, Vol. XII., 1907 (“Histological Notes on the Origin of Rodent Ulcer”).

CASE 2. *Dr. J. J. Pringle's case* (Fig. 2).—The patient, a man, aged 67 years, was an in-patient at Middlesex Hospital in 1897. There were 13 lesions: (a) Five millet seed to rice-grain sized circular or oval nodules, three on the forehead, two on the left temple; (b) four circular nodules with pearly raised margin and depressed red centre of the size of a split pea—one on the lower lid (right) near the inner canthus and one on the left upper lid and two just above; (c) on the left cheek below the external angle of the orbit a crusted lesion a quarter of an inch in diameter; (d) on the left cheek a lesion measuring 1 inch by ¾ inch, having a margin made up of separated rice-grain sized nodules, with here and there crusts between, and a central white scar; (e) on the left cheek between the last lesion and the lobe of the ear a raised flat plateau measuring ¾ inch by ½ inch, rose-coloured, with a network of dilated veins over its surface; and (f) a large ulcer on the back with a narrow rolled margin. The lesions were excised and the larger ones were grafted.

*Histology.*—The microscopic finding was rodent ulcer. The

lesion in front of the left ear showed large cysts, but the others were typical rodent.

II. The following three cases, recorded as examples of multiple benign cystic epithelioma (epithelioma adenoides cysticum of Brooke), have many features which distinguish

FIG. 2.

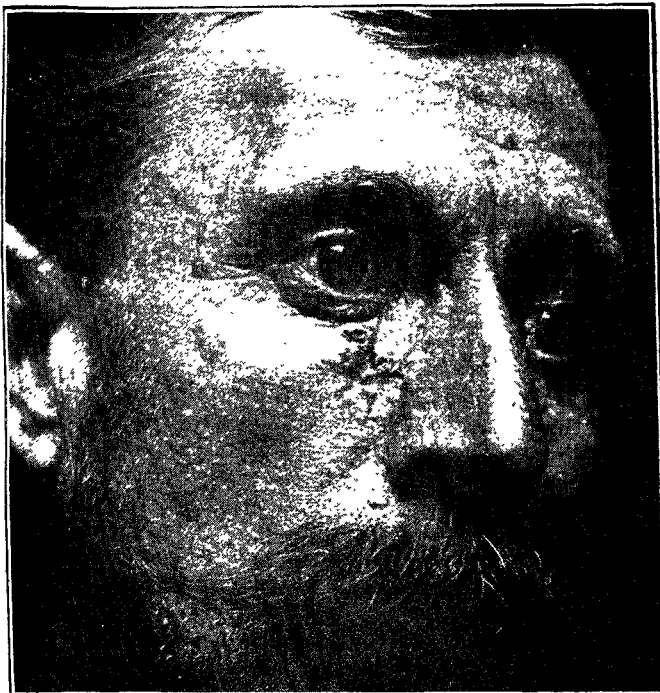


(From a water-colour drawing kindly lent by Dr. Pringle.)

them from the more typical examples of Brooke's affection and which suggest that they are closely related to multiple rodent ulcer, if not actually such.

CASE 1. *Dr. Stelwagon's case* (Fig. 3).—This case (an adult

FIG. 3.



male) is mentioned by Stelwagon in his book on "Diseases of the Skin" under the heading of "Multiple Benign Cystic Epithelioma," and there are two reproductions from photo-

graphs of the case.<sup>1</sup> The picture here reproduced shows eight or nine apparently millet-seed sized to small bean sized smooth flat raised growths about the forehead, the temples, and the sides of the nose. Below the right eye there is a large irregular ulcer with a raised margin. Stelwagon remarks that "the large or bunched lesions exhibited surface degeneration with ulceration and approached closely to the rolled, pearly-bordered superficial epitheliomata." He also says, when discussing the pathology of epithelioma adenoides cysticum, that its relation to superficial epithelioma or rodent ulcer is probably a close one, and although the lesions are thought benign and to show no destructive changes the exceptional cases of White, Jarisch, and his own furnish, in his judgment, connecting examples.

CASE 2. *Dr. J. C. White's case* (*American Journal of Cutaneous Diseases*, 1894, Vol. XII.) (Fig. 4).—The patient was a woman, aged 45 years. The first lesion appeared when she was 22 years of age.<sup>2</sup> There were present at the time of examination as many as 50 lesions on the face and there were a few lesions on the upper trunk and arms (none on the scalp). The lesions varied in size from small pin-head to pea-sized skin-coloured nodules to tumours half-an-inch in diameter. The larger lesions were redder, some were

FIG. 4.



depressed in the centre, others were covered with brown crusts, and some were distinctly of rodent ulcer type. One broken-down lesion measured 1 inch across. There were no milia and none of the lesions had a translucent look, nor were there marked telangiectases. White calls attention, as a most remarkable feature, to the transformation in the oldest and largest lesions. Three or four of these had in recent years taken on the appearance of ordinary epitheliomata in several of its advanced clinical phases—viz., scaling, crusting, and open deep ulcerative destruction of the whole skin. He remarks that if any of the latter were alone under observation no other diagnosis than ordinary epithelioma would be justified, and that ten years ago, when this patient was 35 years old, every lesion would have appeared as "benign" as all those described in all other recorded cases (of Brooke's epithelioma adenoides cysticum), as the great majority, in fact, of those in his own case. He suggests that the natural tendency of such modified epithelial tissue out of place to self-destruction will probably assert itself when it has encroached upon the normal cutaneous structures in such large accumulated masses as in this case, or when after middle life the vitality of the elements of both is impaired.

<sup>1</sup> Dr. Stelwagon has given me permission to make use of these photographs and for this purpose he very kindly sent me the original photographs, one of which is reproduced here.

<sup>2</sup> With Dr. J. C. White's kind permission I am able to reproduce the photograph of this case.



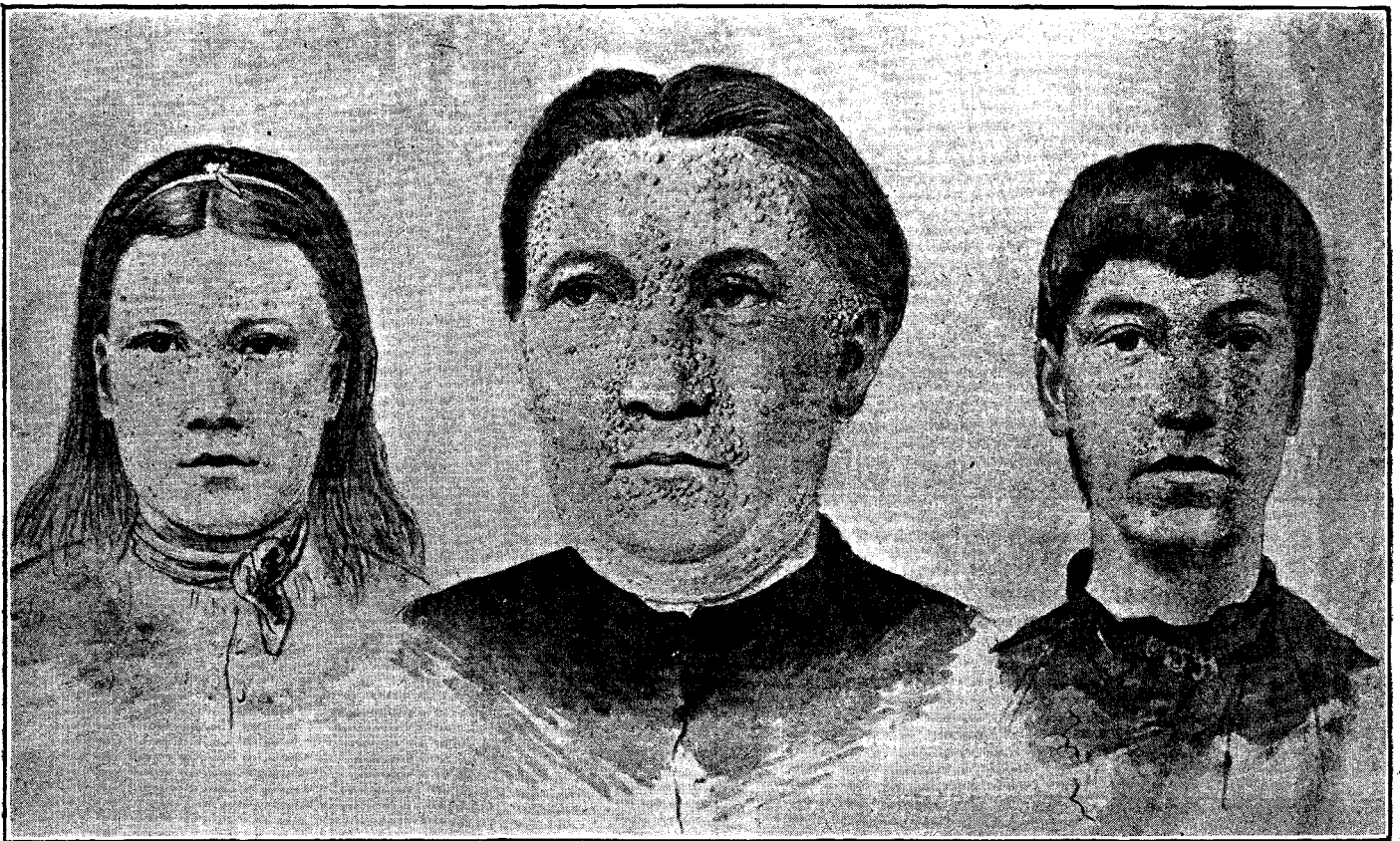
*Histology of White's case.*—The larger lesions showed epithelial masses in the corium arranged in islands and elongated tracts, the latter often suggesting the course of a sweat duct (i.e., with the low power). Under the high power the growth was made up of compact masses of epithelial cells and connected and intermingled in a very complicated way. In their midst were cysts with granular or homogeneous substance and in parts ill-stained epithelial cells. In a few cysts there was a corneous substance in addition to the colloid substance. In all of the tumours a connection of the epithelial masses and tracts with the lower cells of rete could be demonstrated in some of the sections. There is a reproduction of a histological section the appearances of which strongly suggest those of rodent ulcer.

CASE 3. *Dr. Jarisch's case (Zur Lehre von dem Hautgeschwülsten (Hämangio-endothelioma), Archiv für Dermatologie und Syphilis, Vol. XXVIII, 1894, p. 164. Case 2. Epithelioma adenoides cysticum, rodent type).*—The patient was a man, aged 22 years. The eruption began to appear when he was 14 years of age. At the time of examination there were

cases must admit, I think, their close resemblance to the two cases which I have here reported as examples of multiple rodent ulcer. Indeed, Stelwagon and White themselves point out the close resemblance of their cases to rodent ulcer. In the writer's opinion there seems to be greater reason for regarding these three cases as rodent ulcer than as examples of Brooke's affection, and in the following section the characters of epithelioma adenoides cysticum will be briefly summarised in order to contrast them clinically with those of the five cases already discussed.

III. *Epithelioma adenoides cysticum of Brooke.*—In 1892 Brooke of Manchester described four cases of multiple cutaneous tumours, occurring mainly about the face, of epitheliomatous structure, but of benign nature. For many years this affection was confused with another type of multiple benign tumour of the skin which was first described by Kaposi under the title of "lymphangioma tuberosum multiplex," and which has since been variously named syringadenoma, hémangio-endothelioma, nævi-cystepitheliomatosi disseminati, syringo-cystadenoma, &c. It has been

FIG. 5.



Epithelioma adenoides cysticum (Brooke)—mother and two daughters. (Reproduced with Dr. Brooke's kind permission from the plate accompanying his original paper.)

numerous crusted patches which suggested impetiginous lesions but which on removal of the crusts showed ulcerations; larger rodent-ulcer-like lesions (the largest 1 centimetre by  $\frac{3}{4}$  centimetre), one at the inner canthus, one below the eye, one at the ala of the nose; and isolated papules disseminated on the eyelids, between the brows, and on the temples. On the eyelids there were also numerous yellow milia. Jarisch says that the clinical diagnosis of this case presented great difficulties and was only made certain by microscopical examination which showed the identity of the case with those described by Brooke as epithelioma adenoides cysticum. It differed only in one respect—namely, in the formation of ulcers, a difference which, Jarisch remarked, had not the importance it might at first appear to have. Histologically there were long cellular processes, broad, nodulated, with numerous sinuosities, with marginal palisade cells, and with cysts here and there. Jarisch believed these processes to grow from the hair follicle and suggested the name of "tricho-epithelioma papulosum multiplex" for Brooke's type, and of "tricho-epithelioma papulosum rodens" for the ulcerating type.

Anyone who studies the reports of these three cases—of Stelwagon, of White, and of Jarisch—and who examines the photographs of Stelwagon's and of White's

conclusively shown by Unna, however, that Brooke's affection is quite distinct from the Kaposi type both in its clinical and in its histological features. The only recorded cases which actually correspond to Brooke's epithelioma adenoides cysticum are the following:—

1. *Adenoma of the sebaceous glands of face and scalp* (misnamed). Balzer and Ménétrier. *Archives de Physiologie*, 1885, p. 565. (Mother and daughter.)
2. *Adenoma of sweat glands* (also misnamed). Perry. "International Atlas of Rare Diseases of the Skin," plate ix., p. 3.
3. *Multiple benign cystic epithelioma*. Fordyce. *Journal of Cutaneous and Genito-Urinary Diseases*, Vol. X., 1892, p. 459. (Mother and daughter.)
4. *Epithelioma adenoides cysticum (Brooke)*. Csillag. *Archiv für Dermatologie und Syphilis*, June, 1906, p. 163. (Mother and daughter.)

Brooke's own cases (mother and two daughters and one other case) were published in the *British Journal of Dermatology*, Vol. IV., p. 269.

All of these cases had the following features in common:

1. They all occurred in women, and all—except Perry's case and one of Brooke's cases—in mother and daughter.
2. The lesions consisted of pearly-white or faintly bluish

or yellowish nodules, pin-head to pea sized, appearing in early life, and seated mainly upon the face, being grouped especially around the eyes, on the bridge of the nose, in the nasal furrows, and around the mouth. (Fig. 5.) In some cases lesions were present also upon the back between the shoulders, and on the scalp. In most cases the lesions were very numerous and distributed symmetrically. 3. The lesions showed no tendency to crust or to break down nor to enlarge beyond the size of a split pea—i.e., there was no tendency to become locally malignant. 4. Milia occurred on the lesions and also on other parts.

If we compare now the cases of Bruce Clarke and of Pringle here reported as examples of multiple rodent ulcer and the closely similar cases of Stelwagon, White, and Jarisch with these cases of epithelioma adenoides cysticum of Brooke we find that clinically they resemble one another only in that there are multiple tumours upon the face, especially about the eyes, nose, and mouth, and occasionally also upon the back, and in that they may be associated with milia. But they differ from one another in the following points:—

<i>In those styled Multiple Rodent Ulcer or of Multiple Rodent Ulcer Type.</i>	<i>In Epithelioma Adenoides Cysticum.</i>
1. All cases (with one exception, viz., White's case) occurred in adult males.	1. All occurred in women and the lesions appeared in childhood.
2. Not hereditary. <sup>3</sup>	2. Generally in mother and daughter.
3. Distribution of lesions irregular.	3. Distribution of lesions markedly symmetrical.
4. Lesions of widely different sizes.	4. Fairly uniform size of lesions.
5. Tendency of lesions to increase in size and to break down, i.e., to become locally malignant.	5. No tendency of the lesions to enlarge beyond the size of a split pea, nor to break down, i.e., to become locally malignant.

In their clinical features there is, then, very little to indicate a possible relationship between these two groups of cases. One case only, that of White, might be looked upon as a possible connecting link. The patient was a woman<sup>4</sup> and the lesions were so very numerous in the early stage that, as White remarks, the case would then have been regarded as a typical example of Brooke's affection. In the later stages the lesions enlarged and ulcerated, so that "if any of the latter were alone under observation no other diagnosis than ordinary epithelioma would be justified." In Bruce Clarke's case, too, there were very numerous (from 20 to 30) millet-seed to split-pea sized tumours at an early stage, only here already associated with ulcerating growths.

In the next section I shall compare the pathological appearances of rodent ulcer with those of epithelioma adenoides cysticum.

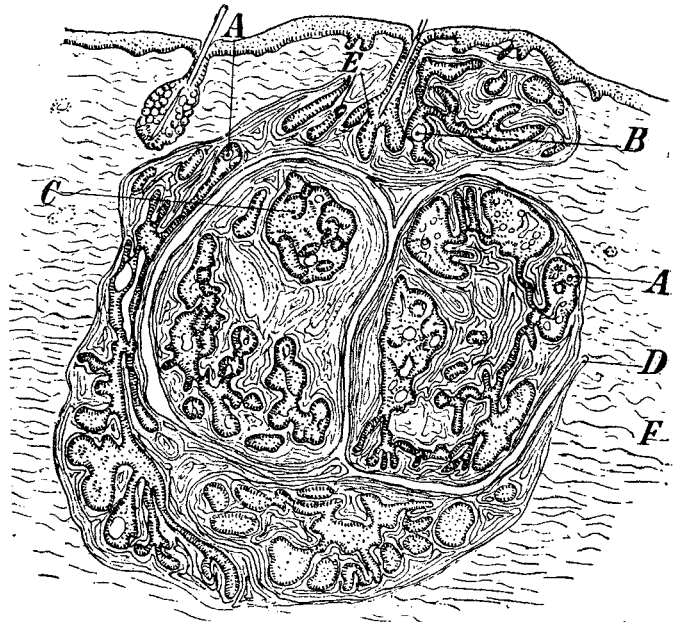
IV. A. *The histological characters of ordinary rodent ulcer* may be summed up as follows. There is a sub-epidermal growth made up of pear-shaped, irregular, or elongated and branched masses of cells, having a more or less regularly arranged marginal palisade layer with central oval cells showing a deeply staining nucleus and protoplasm somewhat scanty and staining badly, and rather smaller than normal prickle cells. In the larger masses there is a tendency in parts for whole groups of cells to stain badly, indicating a degenerative process, and cysts are sometimes formed by massive necrosis of the centre of an alveolar mass. Epidermic cysts may also be present, scantily in most cases, abundantly in others.<sup>5</sup> Another important feature of the rodent ulcer growth is that the epithelial cell masses are separated and surrounded by a stroma of highly cellular fibrous tissue.

From what part of the epidermis or its appendages the cell growth is derived is still in dispute, but the evidence is in favour of its origin from the basal layers of the epidermis or of the hair follicle. This view has been held by Tilbury Fox, by Colcott Fox and by Butlin; and the more recent researches of Dubreuilh also support it. L. Noon in a paper (already referred to above) has, as the result of his investigations, arrived at the conclusion "that there is very

convincing evidence of the origin of rodent ulcer from the Malpighian layer of the epidermis near the neck of the hair follicle, and from the reflection of this layer which forms the outer root sheath of the hair."

B. *The histological characters of epithelioma adenoides cysticum* are as follows. The lesions (Fig. 6) present solid processes of epithelial cells springing from the epidermis or from the epithelium of the lanugo hairs and growing into the cutis in the form of finger-like prolongations and of club-shaped masses. These processes have a margin of palisade-like cells, continuous with the basal layer of the epidermis or of the outer root sheath. They are encapsuled by a highly cellular connective tissue. Lying in the prolongations and

FIG. 6.



Section of a nodule, showing the new growth completely surrounded by normal connective tissue. A, Epithelial "tract." B, Small cyst. C, Mass of epithelial new growth showing convoluted "tracts," and small foci of colloid degeneration, commencing cysts. D, Coating of fine connective tissue which practically capsulates the epithelial new growth. E, Two of the finger-like epithelial growths arising from a hair-sac. F, Normal connective tissue. (Reproduced from a coloured drawing accompanying Brooke's original paper.)

in the masses, but more especially in the latter, are cysts of circular or oval shape, filled with colloid matter and due to degeneration of the epithelial cells. Other cysts are also seen containing concentric layers of epithelium—corresponding to the small milia seen clinically.

*Comparison of the histological features of rodent ulcer with those of Brooke's epithelioma adenoides cysticum.*—Rodent ulcer and epithelioma adenoides cysticum have, then, these features in common. The lesion is made up of an epithelial growth derived from the basal layer of the epidermis or from that of the hair follicles. The growth is in the form of cell masses with a marginal palisade layer and central oval cells. There is a tendency to cyst formation in both—i.e., colloid cysts and epidermic cysts (or milia). In both the epithelial masses have new-formed encapsulating fibrous tissue. Here, however, the resemblance ceases and we find that, while the lesion of Brooke's disease is sharply circumscribed by a highly organised fibrous tissue, there is in the rodent ulcer a more highly cellular and, therefore, more actively growing fibrous tissue element, a plasma-cell exudation at the advancing margin, and outlying groups of epithelial cells invading the tissues beyond the main growth. These differences in the histological features correspond with, and explain to a certain extent, the differences in the clinical behaviour of the lesions—namely, that one is restricted or benign in its growth, while the other tends to enlarge and to involve and destroy neighbouring structures, or, in other words, is locally malignant. But of the essential cause of this difference in behaviour we are ignorant.

In conclusion, in these cases of multiple rodent ulcer of Bruce Clarke and of Pringle, and in the cases of Stelwagon, of White, and of Jarisch, do we see a connecting link between the common rodent ulcer and the multiple benign growths described by Brooke? Clinically there is a wide difference between the single locally malignant rodent ulcer of later

<sup>3</sup> It must be noted here, however, that White's case had two daughters who died quite young and who, it is conceivable, might have later developed the affection.

<sup>4</sup> See Note 3.

<sup>5</sup> See Dubreuilh's important paper (*Annales de Dermatologie et de Syphilis*, 4<sup>e</sup> serie, 2, 1901, p. 705). He records a large number of cases. He found cyst formation (both colloid and epithelial) in a large majority, more especially in nodular growths, which is the type of lesion more common in multiple rodent ulcer.

adult life and the innumerable benign growths of early life, often hereditary. But following these cases in series the difference does not seem so great; beginning with the single rodent ulcer, we then have cases with from two to five lesions, then the cases of Bruce Clarke, Pringle, Stelwagon, and Jarisch, then White's case (in its earliest stages apparently a typical example of Brooke's affection but later with lesions like rodent ulcer); finally we arrive at Brooke's epithelioma adenoides cysticum with innumerable lesions having no tendency to become locally malignant.

Histologically the lesions of rodent ulcer have many features in common with those of epithelioma adenoides cysticum, and they are probably derived from the same part of the epidermis. Pathologically they differ in that the one tends slowly to invade and to destroy the surrounding tissues, while the other has no such tendency.

The study of these rare cases of multiple benign epithelioma (epithelioma adenoides cysticum) in their relationship to rodent ulcer is one of particular interest in that it has a bearing on the question as to what is the essential difference between a benign and a malignant epitheliomatous growth.

Weymouth-street, W.

## THE TREATMENT OF ACUTE APPENDICITIS AS IT COMES UNDER THE CARE OF THE GENERAL PRACTITIONER.

BY JAMES PHILLIPS, F.R.C.S. EDIN., L.R.C.P. LOND.,  
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ARTICLES on the treatment of appendicitis have appeared and are appearing in medical literature, perhaps with greater frequency than on any other single topic, and my excuse for writing yet another article is that, whereas almost without exception the writers on this subject are consultants who see hardly any cases unless and until they have developed symptoms which make the question of operation or no operation one of urgent importance, I have for ten years past had not only an experience of hospital cases but also in general practice have followed cases through from start to finish, have seen cases which at first looked as if pus would certainly form subside without operation, and others which at first looked trivial develop diffuse peritonitis for which immediate operation appeared to give the only chance of life.

When authorities differ so radically as they do with regard to the treatment of appendicitis it must follow that the practitioner will come to rely more and more on his personal experience, grounded on what seems most rational in the various methods advocated. And the first conclusion which will be reached is that no one method of treatment is applicable to all cases of appendicitis. Removal of the appendix the moment it is first found to be inflamed is possibly the most ideal treatment, but it is the ideal of an unattainable Utopia. Lots of cases are not seen at this early stage and of those which are a majority will subside within a few days and the practitioner who advocates "removal on sight" will soon get an unenviable reputation among his patients of being "too fond of the knife," the result of which will be that he will quickly have few patients left to influence for weal or woe. The advocates of "opium and nothing but water by the mouth" on the other hand will every now and again light on a case of gangrene with diffuse peritonitis, in which they will either have to alter their treatment or almost certainly lose the patient.

From the point of view of treatment, cases of appendicitis may be divided into three classes, each with its own appropriate treatment, and in this paper I propose to deal with these three classes in detail. It will, of course, be understood that there is no absolute distinction and that borderland cases must occur which it is most difficult to classify, but most cases will come easily under one of the following headings: (1) mild cases, in which there is tenderness over McBurney's point, but neither a "lump" nor the muscular rigidity characteristic of acute peritonitis; (2) more severe cases characterised by the presence of a definite firm, more or less irregular "lump" in the right iliac fossa; and (3)

cases in which there is evidence of acute peritonitis and without the "lump" which indicates that the inflammation is well localised.

1. *Mild cases.*—When a patient presents the characteristic right iliac tenderness, however quiet the pulse and low the temperature, bed is the only safe place for him. No food whatever is also a good rule; plenty of hot water by the mouth, or barley water or albumin or plasmon water should be given, but nothing that can leave any residue. Many surgeons give a single dose of calomel to empty the bowel, but one cannot help feeling that the active peristalsis so set up may do harm, and personally I give nothing, or if there is considerable flatus I empty the bowel with a turpentine enema. If a "mixture" is required to give the patient confidence a little alkaline carminative produces a feeling of comfort. If there is pain morphine should be given—a quarter or three-eighths of a grain in pill form, or suppository, or hypodermically. If, after the effects of this initial dose have worn off, there is still marked pain, it is almost certain that we have to deal with a development into a more severe type and the symptoms to be described under the third heading must be carefully excluded before giving more morphine. In two or three days the typical "mild case" will clear up under "rest, starvation, and morphine," and then the *pros* and *cons* of removal in the quiescent period with freedom from further attacks, versus risk of recurrence if left, will have to be discussed with the patient.

2. *More severe cases characterised by the presence of a definite, firm, more or less irregular "lump" in the right iliac fossa.*—A patient who when first seen exhibits the symptoms described under the first heading may at a subsequent visit be found to have developed a well-marked, hard, somewhat irregular and quite fixed swelling in the right iliac fossa. This is more likely to occur if the temperature is high (103° F. or over) at the onset of the attack. This condition, however, is much less likely to occur in a case treated by rest and starvation than when the patient has taken a purge for what he regards as "indigestion" and has continued to go about for a day or more after the onset of symptoms. The lump is not to be regarded too gravely. In fact, one has come to welcome its appearance with something of relief. Occasionally a case which seemed to be quite a "mild" one at yesterday's visit will exhibit most alarming signs of diffuse peritonitis when seen next morning, whereas the appearance of a "lump" shows that there is firm matting of intestines around the inflamed appendix and that even if pus is present there is no immediate danger of its bursting into the general peritoneal cavity. If there is a good deal of peri-appendicitis in these cases there is also good "reaction," the temperature for a day or two will probably range rather high (101° to 103° or 104° F.), the pulse probably not over 100 and frequently under 90, while generally the patient does not look particularly ill, and a blood count will reveal a marked leucocytosis. Here our authorities differ as to treatment: "Operate and let out pus," say some; "Delay operation," say others; and with these latter I have come to agree. To operate at once means tedious dissection through acutely congested and friable tissues down to what is usually quite a minute collection of pus around an appendix so soft and glued down that its removal is extremely difficult. Moreover, the pus is full of colon bacilli and infection of the abdominal wound is practically certain, which means a suppurating tract and a weakened abdominal wall. If, on the other hand, the rest and starvation treatment is persisted in it will be found in the great majority of cases that after three or four days the temperature comes down to normal and by the end of a week the "lump" is well on the way to dissolution. If after it has completely disappeared operation is delayed, say for another week, the adhesions will then be found to be easily separable, the appendix sufficiently firm to be easily dealt with, and if, as not infrequently happens, a little inspissated pus remains about its tip, the colon bacillus is probably absent, and by carefully protecting the abdominal incision the pus can be swabbed away and the wound sutured without drainage in the confident expectation of primary union taking place.

Not every "lump" case clears up in this way, of course. Now and again an abscess of some considerable size has formed and these are the cases in which the pus is liable to be discharged through the rectum. But in my experience such an abscess has formed only where rest and starvation