A Clinical Lecture

ON

EPILEPSY CONSIDERED AS A SYMPTOM,
NOT A DISEASE.

BY

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So much has been written about epilepsy from the earliest times that it may seem presumptuous in anyone to think or hope that he may contribute something new to such a subject. I should make no such claim, for I feel sure that much of what I am about to say has been said before, although it may have been said differently, and the subject may have been approached from a somewhat different angle. I have been fortunate enough to have a considerable experience of this disease, if disease it is to be called, during a good many years, and I have been not a little disappointed and surprised at the tendency which has lately become obvious towards an attempt to approach its explanation on other grounds than that of physical disturbance—in my opinion, a definitely retrograde movement.

In a recent paper¹ Dr. Pierce Clark, apparently despairing of any physical interpretation of epileptic phenomena and curiously oblivious of the constant tendency in Hughlings Jackson's writings, sets himself to explain them on a psychological basis. Such a psychological basis for phenomena of which the physical symptoms are so distinct, requires much ingenuity and not a little imagination. It seems to me that it would be just as reasonable to require a psychological basis for Jacksonian fits, or for uraemic convulsions, or for the convulsions produced in a monkey by the intravenous injection of absinth, as for the phenomena of what has been called epilepsy. With regard to the so-called "latent phenomena" of epilepsy we frankly have no belief in them. We happen to know men (and women too) subject to occasional convulsive attacks, who on ordinary occasions are normal healthy individuals, working regularly, doing good work, capable intellectually and physically, in whom the most earnest psychological analyst or observer would fail, we feel sure, to detect any abnormality. And to say that "transitory phobias, ecstasies, and most common of all, irritable and depressive states," are characteristic of latent epilepsy, is to make statements which any physician is able out of even a limited experience, to contradict explicitly. Even of so-called advanced cases of epilepsy—by which we understand is meant cases subject to recurrent convulsions during many years—to say that these are characterized by "ethical depravity of the entire personality" is to state what in the experience of many of us is not correct. Every physician knows that such "ethical depravity" is not uncommon as a degenerative sign without any tendency to convulsion; and what is spoken of as an "egocentric contraction of the entire emotional life," characterized by pathological lying, etc., is certainly not symptomatic of, or confined to, patients who are the unfortunate subjects of repeated convulsions.

Dr. Pierce Clark says he undertook a study of the "character make-up" in a small series of "essential epileptics" before they had their first attack. It would be interesting to know whether this study was really made before the first attack or was an afterthought. If it was made before the first attack one would like to know the basis for his belief that attacks were coming; if it was made after the attacks were established then of course it loses any little value it might have had. He says he found "nothing wanting in the complete picture of the character as seen in those suffering from a long enduring and severe epilepsy." He also remarks on the different attitudes of "trained clinicians" in epileptic colonies and physicians in private practice. He seems to deny the title of "trained clinicians" to physicians in practice. Does he not think that the so-called "trained clinician" in an epileptic colony is much more likely to be biased in his views than is a man who is at least equally well trained, and much more widely experienced in varied forms of disease? He even

claims that the colony physician has a much broader view of the whole problem, which, of course, is absurd, seeing that he is dealing with advanced and apparently incurable cases, and has no experience (or ignores it) of patients subject to occasional attacks who are able to get about, to do good work, and of whose tendency to occasional attacks everyone, except their immediate relations and their physician, is in complete ignorance. The colony physician surely has a narrow and restricted view of these phenomena because his patients are of a class only suitable for institutional treatment—for, as the author confesses, the institutional physician "receives the most badly deteriorated patients." It is quite beside the mark to say these are "fearfully handicapped by drug and surgical treatment." The point to be recognized is that as a class they are deteriorated. But it does not at all follow that the numerous patients subject to occasional convulsion—many of them active and useful and energetic members of society—are to be regarded as the subjects of the same psychical condition as those institutional inmates.

With special reference to Dr. Pierce Clark's assumption that there is something in the so-called "psychological make-up" of patients usually called epileptic, I will now mention briefly some cases which have come under my own observation which to my mind afford clear evidence that patients who have suffered from these so-called epileptic fits have no signs of either physical or mental deterioration.

The first case is that of a healthy-looking man of 50, who consulted me some years ago on account of several convulsions occurring in the previous year. He was an energetic business man, busily engaged in the control of a large and important business in which he had been unusually successful. The history was that at the age of 17 he had had an attack in every way similar to those for which he consulted me. He was put on simple treatment, his activities, mental and physical—he was a keen lawn tennis player and golfer, as well as an active business man—were in no way interfered with, and he went on well. Soon after I saw him he was elected Provost of an important town in Scotland, and the duties of this office—extremely exacting throughout his years of office during the war—were carried out in such a way as to earn him praise from everyone, and recognition in the highest quarters. He still pursues his active business career and is in every respect a healthy man. He has entirely left off medicinal treatment.

The next case is that of a young man of excellent physique, who two years before the war had on successive days two generalized convulsions. He was put on medical treatment, which was continued in gradually decreasing doses for two years. There was no recurrence of any kind, and he served in the army during several years of the war. He is, and has been since he was demobilized, actively engaged in an extremely responsible position in a business house, and has remained quite well.

The next case also is that of a young man—a hospital patient, engaged in electrical work, who for some years had been subject to recurrent convulsions, with loss of consciousness. He had been compelled by the frequency of these to give up his work, and treatment at first only succeeded in abating the frequency and severity of the attacks. Persistence in treatment, however, was finally successful in completely controlling them, and for over a year now he has been free from attacks, and has been actively engaged in his somewhat arduous and responsible work.

The next case was certainly at first sight not a promising one—a lady between 50 and 60, who had been subject for many years to convulsive attacks, with loss of consciousness. These occurred at varying intervals—sometimes of months, occasionally of days—and there were also occasional minor attacks. Treatment on rational lines in her case was also successful, and she has now been for over a year free from attacks, living the ordinary social life of a lady of good position, and occupying herself much in good works.

The last case I shall mention is that of a lad whom I saw five years ago, who had then had only a few attacks, always in the morning after getting up. He had one or two after treatment was commenced, but none in the last two years, and he is now actively engaged in study at one of the universities.

I could mention other cases, but these will suffice to emphasize the point I wish to make, namely, that patients who have been the victims of attacks—even if these have been spread over a good many years—do not necessarily deteriorate either physically or mentally. I may mention that in all these cases bromide has been the “sheet anchor” in treatment, but this, like other drugs, must be used with intelligence and discrimination, both in regard to dose and mode of administration. Of course, no one with any experience of these cases of convulsion can think of denying that there are cases—unfortunately not a small class—in which treatment is inefficacious, and in which the convulsions persist in spite of all one's efforts at treatment. These we must assume are cases in which degenerative processes are superadded to some local disturbance, or cases in which the local disturbance is so situated or is of such a nature as to lead to such changes. But it seems to me unreasonable to suppose that such cases are the result of anything but physical changes.

I think that in the past we have given far too much attention to those cases of generalized recurrent convulsions to which the name of epilepsy has been applied, and too little attention to those cases of localized or Jacksonian attacks which were also described by Bravais. For I believe it is by a study of these and of their relation to the cases of so-called ordinary epilepsy that any real step forward in the elucidation of the nature of these ordinary cases, and in their treatment, is to be looked for.

Although I was under the impression that I had arrived at this belief independently, I have little doubt that I must have imbibed the substance of it from Dr. Hughlings Jackson's teaching. For I have recently found that so long ago as 1874 he wrote as follows:

“I have long been convinced that ‘idiopathic epilepsy’ is far too difficult a subject for precise investigation unless we approach its consideration from the bases supplied by the principles deduced from the less complex kinds of cases.”²

Again he says:

“Epilepsy like aphasia has been studied with a psychological habit of mind, and, as I think, this way of studying such a disease is unfruitful.”

Let us now consider for a moment these cases of localized or Jacksonian fits. These fits are recognized as the result of changes occurring locally in the brain giving rise to signs of irritation in the peripheral structures, motor or sensory, related to the unstable brain area.

We need not consider now the nature or cause of the irritability. It may, of course, be various. A certain part of the brain is irritated, movement is produced in a peripheral part and may remain restricted to this, or the movement may spread so as to affect all parts of the body, and also affect consciousness, this being the result of a spread of irritation from an unstable area to normal structures. In other words, the convulsion may become general—any Jacksonian fit may become a general convulsion—the convulsion may start as the result of irritability in some unstable cells, but the irritability may spread from this focus or fulminating area and cause discharge in structures which are quite healthy and normal. It is not uncommon for a patient subject to Jacksonian attacks to suffer from attacks of varying degree. On one occasion the convulsion may affect only a finger and thumb; on another occasion it may spread to affect a whole limb; or on still another the convulsion may affect the whole body, and if this happens, consciousness is almost always, if not invariably, lost. If the convulsion is a purely local one, consciousness is nearly always retained, and not infrequently a local convulsion is prevented from spreading by firm pressure on, or pulling of, the limb proximal to the part already in a state of movement. Many such cases have been published, and the evidence is familiar to all students of this disease. In such a case we are justified in assuming that there is some local condition—it may be mechanical, it may conceivably be chemical or nutritional, rendering a few cells unstable and inducing in them a tendency to the discharge of nervous energy; and the instability of these cells may, unless it is by some means prevented, as by some strong effect on the peripheral structure, induce in contiguous healthy cells a similar instability and tendency to the liberation of nervous impulses. If this spreads widely enough a general convulsion may result.

As an illustration of what I have here said I may

mention the case of a patient seen with Dr. Fawcett and Dr. Spon, and subsequently by Mr. Percy Sargent. The patient was a healthy man who had for some time suffered from fits, some slight without any loss of consciousness, others more severe with general convulsion and loss of consciousness. All the fits, whether slight or severe, started with a sensation and subsequent movement in the right lower limb. Sometimes the convulsive movement affected only this limb and consciousness was not lost. In others the movement spread from this limb and became generalized, and consciousness was lost. It was obvious that in this case the focus of irritation was in what is known as the leg area of the left hemisphere, an area near the middle line. There was no headache and no optic neuritis, but the condition was regarded as probably the result of the irritation caused by a tumour growing in or from the meninges in this region, and Mr. Sargent was able to remove a growth of a non-malignant character from the situation in which it was possible to foretell its presence. I have purposely refrained from over-burdening this brief account of this case with details which are unnecessary for our present purpose, which is to show that local irritation may give rise to only a local disturbance in the peripheral parts—a Jacksonian fit—or may result in a general convulsion commencing locally. I may mention that although the fits in this case occurred once or twice after the operation, and although there was some subsequent weakness of the affected side, the fits have now been absent for some years.

There is a class of patients consideration of the cases of whom is very instructive from the point of view of local irritation causing fits. I refer to cases of so-called infantile hemiplegia the result of an inflammatory condition similar to that occurring in the spinal cord causing infantile paralysis, and probably identical in origin. The initial illness is usually acute, characterized by violent convulsion, feverishness, etc. The convulsions in such cases commence unilaterally, and during the acute stage become general, and there is not infrequently a condition of real *status epilepticus*. If the patient recovers, the resulting condition is one of hemiplegia, sometimes very severe, sometimes very slight, and in after-life there is a liability to the occurrence of convulsions, sometimes only unilateral of the affected side of the body, sometimes spreading from such a commencement to become general.

I might here digress for a moment to recall the fact that besides the severe general convulsion with tonic and clonic spasm—*grand* or *haut mal*—which occur in so-called idiopathic epilepsy, there are also conditions of *petit mal* in which there may be only momentary loss of consciousness without convulsion. I now proceed to relate a case which was under my care and observation for some years—that of a woman of 25 with a definite history of convulsion occurring in early life in the course of a feverish attack, and resulting in slight right-sided weakness. The hemiplegia, it was said, passed off, but there was still slight right-sided weakness. The patient was left-handed, but was able to write with the right hand, and the condition was obviously one of very slight right hemiplegia dating from early life, and apparently the result of an attack of polio encephalitis of the left hemisphere. She consulted me on account of her liability to occasional “fits,” apparently general convulsions, starting in the right hand. But even more troublesome than the attacks of severe convulsions, which did not occur very often, were attacks of *petit mal* of frequent occurrence, and often followed by a condition of “automatism” in which apparently purposive acts were carried out quite unconsciously.

Such attacks of *petit mal* with automatism are supposed to be characteristic of so-called essential or idiopathic epilepsy, and I would urge that a case such as that which I have just related is somewhat strong presumptive evidence that such a condition of *petit mal* is probably in other cases associated with actual structural changes in the brain, just as it certainly was in the case I have related. I do not here refer to the explanation of the automatism.

Dr. Hughlings Jackson was, I believe, the first to direct our attention to an exceedingly interesting class of cases, in which the chief symptoms were a curious aura of “reminiscence,” also spoken of as the “intellectual aura” or “dreamy state,” in which the patient seems to be passing through a familiar experience so that he almost knows what is coming next, and this is usually, although

not invariably, associated with a curious but indescribable, often disagreeable, smell. To such cases Dr. Jackson applied the name "uncinate epilepsy," because in some cases in which such an aura was associated with convulsions, or at least with loss of consciousness, a lesion was found in the uncinate gyrus of the temporo-sphenoidal lobe.

In some cases the lesion was a tumour, in one case a small non-malignant cyst. In the case in which the cyst was found by Dr. Walter S. Colman the patient was a medical man who had been subject for many years to recurrent attacks ushered in with the "dreamstate." In this case the cyst was probably the result of some early, probably vascular, lesion, the effect of which was to produce a small area of unstable cells in that particular region. Here was a case characterized by recurrent convulsions of a particular kind, only differing from other cases of so-called idiopathic epilepsy in the character of the aura which preceded a fit. We know that in some of these cases the convulsion is associated with a structural change in a certain part of the brain. It is only reasonable to conclude that in all of them this same area is unstable—the cause of the instability in many is not proved—but the presumption is that in all the cause is a structural derangement.

There is another class of cases in which the convulsion is preceded by a visual aura. In some of these the aura is a somewhat elaborate one—a little woman in a red cape or some equally definite vision. In many the visual sensation preceding a fit is a simple one of flashes of light, and this causes the convulsion. In one case, which I have related elsewhere, the fits were left-sided, preceded by an indefinite disturbance of vision. These fits had come on rather suddenly and unexpectedly in an old lady sent to me by Mr. Fisher, and they were associated with definite homonymous hemianopia. The fits gradually ceased, the hemianopia persisting but gradually and completely disappearing. This lady made a complete recovery, and remained well for several years. In such a case one is justified in assuming that there was some vascular lesion—in the occipital cortex—which was at first irritative, but when the irritability of the cortex had subsided or been controlled resulted in temporary interference with the functions of the area in the cortex subserving the fields of vision of the opposite side. Such a case suggests that in cases with similar visual phenomena associated with fits the fits are due to some disturbance in the same area, and the fact that the convulsions are recurrent merely shows that the irritation is a persistent one, and not transitory, as in the case just related.

There is another class of cases that have to be considered—those, namely, in which attacks may have been present for years, associated with convulsion and loss of consciousness, but yet in which no sign of gross disease has been discoverable. I have elsewhere related two cases of this nature—one a patient who had been attending at the National Hospital, Queen Square, for seventeen years suffering from recurrent convulsions, but who unexpectedly developed headache, and was found to have optic neuritis. This patient died, and was found to have a large cerebral tumour. Another patient was under my own care, and had been attending for four years on account of occasional convulsion with loss of consciousness. He had no headache and no optic neuritis, and his convulsions were few in number under treatment; but he suddenly found himself suffering from severe headache, was found to have optic neuritis, and the headaches became so severe that decompression was undertaken with the hope of relieving him. There was intense intracranial pressure, and he died after a few weeks, and a large growth was found in one hemisphere. These two cases are, I believe, examples of a group—not perhaps a very large one—but they illustrate the thesis, so far at least as such a group is concerned, that such cases—apparently for years cases of so-called idiopathic epilepsy—are really cases in which early slight structural changes are almost certainly the cause of the fits.

It is well known to all who are interested in cases of recurrent convulsion, and who see many patients suffering from these, that there is a large class of cases in which the fits occur only during the night, so it is said, and these cases are named "nocturnal epilepsy." I think most observers will agree with me that it is not the time of day which determines the onset of convulsion in these cases, but the condition of sleep, for it is not uncommon for a

patient who suffers from such convulsions to have a fit during the day if he happens to fall asleep. So that it is sleep that really determines the attack, and the presumption is that it is some condition of nutrition or circulation associated with sleep which gives rise in certain cells to discharge which results in a convulsion. What the actual condition is we need not at present inquire. It is sufficient for our present purpose to note the fact.

In another class of cases the fits always occur in the early morning while the patient is dressing. In one case the fits only occurred if the patient had an early cold bath, and always occurred in the bathroom. In such a case it would seem as if the change of posture from the recumbent during the night to the upright in the early morning was the determining cause, and it seems natural to presume that the accompanying modification of the circulation was sufficient to give rise to the conditions determining a discharge in unstable cells.

Such considerations as those I have set out and the study of cases of a nature similar to those I have mentioned, seem to me to indicate clearly that epilepsy should not be regarded as a disease but as a symptom. The convulsions of what is called epilepsy are not in their manifestations to be distinguished from the convulsions of uraemia or from those occurring with heart-block and in other conditions. It is only the discovery of associated conditions which reveals the true nature of the convulsions, and the more one sees of these convulsions in what is called ordinary epilepsy the more is one driven to the acceptance of Hughlings Jackson's dictum that "there is no such thing as a case of ordinary epilepsy."

Each case of recurring convulsion must be studied by itself. The origin of the convulsions, their nature, the march of the discharge, and especially any premonition or "warning," must be most carefully considered. By such study the cause of the convulsions is most likely to be revealed, and if this is disclosed, treatment, either surgical or medical, may be undertaken with some hope of success.

REFERENCES.

¹ *Brain*, vol. xliii, pt. 1. ² *Med. Times and Gazette*, October 14th 1874. ³ *Ibid.* ⁴ *Brain*, vol. xxi, p. 580.

An Address

ON

THE HOUR-GLASS STOMACH.*

(With Special Plate.)

BY

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A DESCRIPTION of this well-known condition—hour-glass stomach—is hardly necessary, and in its typical form the x-ray picture is dramatic to a degree (Fig. 1). The picture of such a typical condition, after a test barium meal, shows the upper sac or cardiac end full of the food, and the lower end of this shadow has a clear cut margin, which as a rule comes down below the level of the narrowed outlet. At the site of the outlet on the lesser curvature is the ulcer cavity, with its lower part full of the food and with a gas bubble above it. A narrow stream of food passes downwards into the lower sac. This lower sac is half filled or more than half filled with food, and in this lower part, as watched on the x-ray screen, normal stomach contractions are seen and food going through the pylorus. This is the typical picture, but its x-ray varieties are very numerous, and scarcely any two cases are exactly alike in all their details. I have a record of 151 cases in which radiography showed an hour-glass condition of the stomach following on a test meal. An analysis of these cases brings out certain facts and shows certain fallacies and the possibilities of errors. The many variations which occur will depend upon, for the most part:

1. The size of the upper sac.
2. The size of the constriction.
3. Whether or not an actual ulcer cavity exists and fills up with food, and, if so, its shape and size, and whether there are adhesions to neighbouring organs and tissues.

* Given before the Manchester Medical Society, November 1920.