

## Mental Epilepsy.\*

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It is a well known fact that mental deterioration or derangement is one of the most frequent results of epilepsy. Indeed, we seldom meet with a patient suffering from this disease in whom close examination will not reveal some degree of intellectual impairment. Of the 532 epileptics examined by Ecchiverria mental failure was evident in 70.3 %, and of this number 26 % exhibited attacks of mania lasting from a few moments to several days or weeks.

The amount of mental failure varies greatly in different individuals, and is not always dependant upon the duration of the disease, although the liability of its occurrence is greatest when the attacks commence during early childhood.

As a rule, epileptics are very impressible, disinclined to exertion, capricious in their tastes and feelings, and quick to take offence at slight causes. Even if the mental impairment is but slight, the finer sensibilities are usually blunted, and they are often careless in regard to their personal appearance, and indifferent in their ob-

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servance of the proprieties of life, while vicious and criminal propensities are not infrequently present, rendering the individual unfit to mingle in society or unsafe to be permitted outside of asylum walls.

It is not my purpose at this time to discuss that form of mental degradation most frequently met with, known as Epileptic Dementia. I prefer rather to briefly call attention to those rarer forms of epilepsy in which the patients are subject to periodical attacks of mental disturbance during which the most peculiar actions may be performed, or the most atrocious crimes committed. Some of the most revolting and purposeless murders in the annals of crime have been perpetrated by patients during an attack of mental epilepsy. This form of derangement is, therefore, of interest from a medico-legal point of view.

Those mental disturbances in epileptics, which I shall briefly consider, occur—

(1.) In the beginning of an attack.

(2.) After an attack.

(3.) In the intervals between the attacks, or in place of a convulsive seizure.

Occasionally an epileptic paroxysm of greater or less severity is ushered in by an attack of furious mania during which the patient may be so destructive and homicidal as to require strong restraint to prevent violence to property or person. After a varying interval of time this maniacal period terminates in one or more convulsive seizures, and when the immediate effect of these have passed the patient returns to his normal

mental condition, which usually continues until the occurrence of another paroxysm. In most of these cases there is no warning whatever, the attack is sudden in its onset, and the patient may do violence to others before assistance can be obtained. The suddenness of these attacks, like lightning from a clear sky, renders these patients difficult and dangerous to deal with, and unsafe to be at large in the community.

There is, however, another class in which the patients are, for days before an attack, peevish, impulsive, and very irritable. These may at times commit acts of violence upon the slightest provocation, but such acts are due rather to an outburst of temper than to an attack of real epileptic mania. They are conscious of what they are doing, but easily lose their self-control, become enraged, and sometimes plead in excuse that "they cannot help it."

Maniacal outbreaks, preceding an epileptic convulsion, are, it seems to me, to be considered as the initial effect of the central discharge; they form the earliest manifestation of the epileptic paroxysm. The mental centres in these cases are first affected, the motor centres afterwards becoming involved with the resulting convulsion. These mental disturbances are analogous to the feelings of alarm or terror so often experienced by epileptics, or to that indescribable dreamy feeling which these patients often complain of, and which was especially marked in one of my patients in whom it preceded by hours, a convulsive attack.

Gowers reports 25 cases in which a psychological aura pre-

ceded the convulsion, in 10 of which there was an emotion and in 15 an idea. "Just as different bodily derangements," says Falret; "may precede by a few minutes or a few hours, so the convulsive attacks of epilepsy, may be preceded either immediately, or at a greater or less distance, by different disorders of mind or temper."

In Brain for July, 1883, Dr. Chas. Mercier reports a most interesting case, in which the convulsions were preceded by a peculiar mental condition. "At the outset of every batch of fits, the first noticeable occurrence usually is, that the patient becomes captious and irritable, quarreling with all her neighbors without reasonable provocation. When questioned at this time she answers defiantly and insultingly, in a manner quite alien from her usual demeanor. At the same time, or soon after, she begins to complain of pain, often definitely localized in the side or shoulder blade, or epigastrium, and later of "horrible feelings" in her head and chest, and all over her. The look of distress that her face has borne hitherto, now deepens into an expression of mingled sulky ferocity and anguish; and as time goes on, the latter expression predominates and the former fades out. Next she becomes taciturn, answers impatiently and indistinctly—her articulation is first slovenly and then decidedly defective. She appears overwhelmed with unutterable languor, her limbs are flaccid, and her attitude one of limp helplessness. Her answers come at longer and longer intervals, and at length are elicited only after repeated and urgent

questioning, and she no longer looks at you when she speaks. Her expression becomes more agonized, but has added an increasing look of vacancy, and at length a definite strabismus appears, marking the period when answers can no longer be obtained, although a trifling movement of the lips, or a faint gesture of despair shows, that consciousness is not altogether lost, when this stage is reached the onset of convulsions is not far distant, indeed it may be said to have already begun, for upon examination at this stage the hands and fore-arms will be found to be somewhat rigid. \* \* \* \*

All these occurrences point with converging indication to a gradual obliteration of the central functions, progressing from the highest downwards; and it is difficult to see what possible origin this obliteration could have, other than a gradual discharge. Yet there was no convulsion to indicate such a discharge. Guarding myself against too dogmatic an interpretation, I would ask if this absence of convulsion may not fairly be ascribed to the extremely deliberate and gradual escape of the liberated energy? That it was very deliberate, is shown by the fact, that it took many hours and even days to reach the same degree that is reached in an ordinary epileptic fit in a few seconds. That it was very gradual every observation showed, for no sign of definite stages was ever observed. \* \* \* \*  
It does not, therefore, appear to be claiming too much to suppose that the whole available surface of energy in the central centres may ooze gradual away, without giving rise to any convulsive phenomena whatever, and

may thus leave the lower centres uncontrolled and free to indulge in the most rampant excess of action. \* \* \* The importance of the view here advocated is this, that if it be adopted it may lead to the explanation of those numerous cases in which maniacal attacks precede the fits in cases of epilepsy—cases which have always been obstacles in the way of adopting the hypothesis of Loss of Control.”

Another case recorded by Ball, is that of an ecclesiastic, whose convulsive attacks occurred two or three times a month. Each period was preceded for eight or ten days by a melancholic delirium, in which ideas of persecution and hallucinations of hearing were present. Then would follow the convulsive paroxysm and several days of hebetude, after which he would enter upon a period of inexpressible self-satisfaction. This would last for a fortnight, to be succeeded by a state of melancholia and convulsions.

Sometimes peculiar paroxysmal sensations precede for months an outbreak of convulsions in an individual who has previously been free from them. These may be the only indications of epilepsy and are variously described by patients as “reveries,” “thinkings,” “forgetfulness,” &c., there is a momentary confusion of ideas without any convulsive action whatever. That these cases are epileptic is shown by their future history, when undoubted epileptic attacks made their appearance, being then immediately preceded by the same peculiar mental phenomena. Morel remarks that “The epileptic neurosis may exist for a considerable period in

an undeveloped or masked form, showing itself, not by convulsions, but by periodic attacks of mania or by manifestations of extreme moral perversion, which are apt to be thought willful viciousness. But they are not; no moral influence will touch them; they depend upon a morbid physical condition; which can only have a physical cure, and they get their explanation, and indeed, justification, afterwards when actual epilepsy occurs."

In another class of cases an epileptic attack is succeeded, after a varying interval of time, by a greater or less degree of mental disturbance. The mental condition following an epileptic seizure varies greatly in different individuals, while the acts performed are often of the most complex nature, indeed, it is sometimes difficult to convince one's self that they are not intentional and under the control of the will. Gowers relates a case of a carman who would drive through the most crowded parts of London without accident for an hour after an attack and retain no recollection of it afterwards, while Dr. Radcliffe knew a young lady who was capable, while in this state, of playing the most difficult music without mistake.

This class may exhibit every degree of mental disturbance, from a dazed stupid appearance, to the most complicated automatic actions, and the wildest acts of maniacal fury. These phenomena are of an automatic nature and are probably due to loss of control of the highest centers over other centers just below them. "The condition" says J. Hughlings Jackson, is duplex

(1) there is loss or defect of consciousness, and there is (2) mental automatism. In other words, there is (1) loss of control *permitting* (2) increased automatic action.”

Attacks of epileptic mania occur most frequently in this class of cases and the annals of crime abound in examples of violence committed by epileptics after a convulsive seizure, but it is also important to remember that post epileptic phenomena are very liable to occur after the slighter seizures, and unless close attention is paid, the preceding attack may be entirely overlooked. It is possible for a patient to have slight nocturnal attacks for a long time without detection which may be followed by otherwise unaccountable actions, their recognition, therefore, is often of the utmost importance as explanatory of many obscure medico legal cases. I have but little doubt that many cases of so-called transitory mania properly come under this head, the slight seizures to which the patient was subject, having entirely escaped observation. The diagnosis of mania transitoria should not be made until a careful research into the patient's past history has eliminated all possibility of the presence of epilepsy. These diseases resemble each other in their sudden outbreaks of blind fury, in the absence of a clear recollection of the morbid period, and in being generally concluded by a deep sleep.

In a third class of cases the transient or prolonged outbreaks of mental disturbance have no immediate connection with either slight or severe epileptic attacks,



they occur independently of either, and often in the intervals between the severer seizures. At times they seem to occur in place of a convulsion, then constituting its psychological equivalent. In these cases there is evidently a convulsion of ideas rather than a convulsion of muscles, the mental centers alone apparently being affected.

This form of masked or larvated epilepsy has been described by Morel and Falret as characterized by wild outbursts of maniacal excitement without contemporaneous convulsion. Of course in some instances these mental disturbances are really post epileptic in character, the preceding slight seizure having escaped observation, but other undoubted examples occur in which the discharge is purely mental and has no immediate relation to any other epileptic manifestation.

An interesting case of <sup>5</sup>masked epilepsy is related by Falvet. A shoemaker, Francois L——, was for many years subject to epileptic seizures. The attacks, which at first were followed by but slight alteration of the reason, became more serious, and were accompanied by furious mania. Sometimes the fit was replaced by homicidal delirium, as in the following instance: When he was through with his military service (he had been a soldier), he returned home and decided to marry. The ceremony was fixed for October 26, 1841. The 24th an intense headache came on, and seemed to him to betoken an impending attack. He called a physician who had formerly treated him for the disease, and demanded to be bled, an operation which had

always given him relief. The physician refused to gratify his request. The 26th, some hours before the wedding, he was bled by another physician, but without any diminution of the pain. During the marriage ceremony Francois was dejected and taciturn ; he said nothing but the one word, *yes*. On quitting the church he was seized with a most atrocious pain in the head, and when he arrived at the house of his father-in-law he was obliged to take his bed. The bed chamber was adjoining the dining room where the wedding feast was being prepared. Then he was seized with an attack of epileptic madness, and while the persons who were with him were hunting for cords to tie him, he precipitated himself naked into the dining room with a shovel, of which he had obtained possession, pursued a woman who fled before him, threw her down and inflicted heavy blows upon her head. His father-in-law interposed, when he flew at him and drove him from the house. He cast himself on the ground before the door, biting the threshold with his teeth ; then he rose, with a shoe knife in his hand, opened the door with force, crying out that he would kill them. The first person he met was his father-in-law whom he instantly killed. This attack lasted for three days. On the 28th his reason returned, but he remembered only the event of his marriage, and nothing of that which came after. He supposed he had slept all that time. He was at once removed to the asylum at Clermont, where he still remains."

The phenomena attendant upon this form of epilepsy

are, however, not always maniacal in character. Indeed, I am not sure but what many attacks of petit-mal might properly be classified under this division.

In many slight seizures the mental phenomena are the only indications of an epileptic attack, as, for example, when there is a momentary impairment of consciousness, as shown by the change in color, by a transient fixed stare, or an instant's lapse in conversation.

These instances in which there is a momentary blank in the mental processes without spasm are of common occurrence, although they do not always attract the attention which they deserve.

At other times the mental derangement may consist of the automatic performance of the most incongruous acts, of which memory preserves no recollection. Trousseau relates an instance of a gentleman belonging to a literary society who was seized with vertigo at one of the meetings. He ran quickly down to the Place de Hôtel de Ville, and walked about for a few moments on the quays, avoiding with success both carriage and passers-by. On recovering himself he perceived that he had come out without his great coat and his hat. He therefore returned to the meeting, and resumed, with a perfectly lucid mind, the historical discussion in which he had already taken a very active part. He retained no recollection whatever of what had occurred between the beginning of the attack and the moment he recovered himself.

Occasionally an epileptic passes into a peculiar mental condition during which, although the acts performed

are highly complex and apparently consistent with conscious mental life, yet they are really more or less automatic in character, while the individual preserves no recollection whatever of their occurrence.

In these cases, as Dr. Jackson remarks, "Highest consciousness seems to be lost, and the automatism has an accompaniment of some degree of consciousness, or sub-consciousness." Dr. Hamilton, of New York, reports a case, "of a young gentleman of twenty-three who had irregular epileptic seizures for some years. He went to bed one evening as usual, arose, and breakfasted with his family without creating any suspicion that he was at all unwell. He then went down to his place of business, and, after his arrival, was sent to a distant part of the city after a tool. On his return down town he stopped at a tobacconist's and became involved in a quarrel with one of the persons in the shop. A policeman was called, who, more intelligent than many of his class, detected something queer about the man, arrested him, and afterwards took him to Bellevue Hospital. There he remained three days, and suddenly returned to consciousness and a knowledge of his surroundings, but was entirely ignorant of his unfortunate experience."

Another very interesting case is related by Dr. Hammond of a gentleman "who, subject to attacks of both grand and petti-mal, left his office at about eleven o'clock for the purpose of getting a signature to a paper of some kind from a gentleman whose place of business was a few moment's walk distant. Not returning by

three o'clock, inquiry was made, and it was ascertained that he had visited the office, obtained the signature, and left, apparently in good health before half-past eleven. Since then nothing had been heard of him. He did not make his appearance at his own office till nearly five o'clock. The last thing he recollected was passing St. Paul's church at the corner of Broadway and Vesey Street, just as the congregation was coming out after morning service. It was subsequently ascertained that he had gone to Brooklyn after getting the signature he wanted, had visited a newspaper office and purchased a paper ; had returned to New York, entered an omnibus at the Fulton Ferry, left it at the corner of Twenty-Third Street and Fifth Avenue, entered the Fifth Avenue Hotel, and while there recovered his recollection."

In the majority of instances of epileptic mania or automatism, whether occurring before, after, or in the intervals between severe or slight attacks, it will be found that the outbreaks are generally sudden in their onset, that the acts performed are unpremeditated, without motive, and accompanied by impairment of consciousness and an absence of all recollection of the events which have transpired during the paroxysm.

Most writers on this subject agree that loss of consciousness is a necessary accompaniment of epilepsy. There can be no question but what consciousness is always impaired, there is loss or defect of highest consciousness, but I cannot understand how it is possible for an individual to completely lose consciousness and

still be able to perform co-ordinated acts. Complete loss of consciousness, as I understand it, is coma, and this is generally present during a typical epileptic attack. There are, however, degrees of involvement of consciousness from the slightest mental confusion downwards in the series to complete insensibility or coma.

As a rule, an epileptic maniac is not conscious of what he is doing, and is, therefore, not responsible for the acts then committed ; but instances now and then occur in which the defect of consciousness is scarcely perceptible, and these sometimes form very puzzling medico-legal cases. "I have seen numerous cases," says Dr. Hamilton, "in which an apparent conservation of consciousness remained throughout a slight monospasm, but I do not feel at all sure of this ; and in cases of aborted or masked epilepsy, there is a dual mental state which would readily deceive the lay observer."

The acts performed during an attack of epileptic mania are generally unpremeditated, and without any adequate motive, indeed, the wild, purposeless fury which possesses these patients is quite characteristic of their mental condition. But cases are occasionally met with in which there is an apparent premeditation. An epileptic, like other individuals, is capable of cherishing feelings of hatred and revenge ; long brooding over a real or fancied injury will leave its impress on the brain cells. When the epileptic paroxysm occurs, these cells may act automatically, impelling to the commission of a crime, which is really, for the time being, beyond the

power of the patient to prevent. During his sane moments, the individual may have even uttered threats against the life of his victim, which would be brought forward as evidence against him, and yet actually commit the murder while in the epileptic automatic state, during which he is not responsible. "Sometimes," says Dr. Jackson, "the post epileptic actions are plainly determined by what was done or doing just before the paroxysm set in; sometimes they are going through some performances highly habitual in the patient."

An interesting case has been recently reported by Dr. Stedman, of Boston, of a lady, forty-six years of age, who, from childhood until nineteen years of age, was subject to seizures, during which she would fall down and lose consciousness, knowing nothing of the circumstance afterwards. From the nineteenth to the twenty-sixth year she had only one attack and that was during pregnancy. The latter part of her home life had been very unhappy, and she became melancholy and suicidal; about three months later the idea of killing her children occurred to her, after reflecting that her own death would cause them to be neglected. During this period she suffered considerably with pain in the head, and a sense of bewilderment and confusion would come over her until she hardly knew what she was doing. She arose one night to carry out her design but could not summon sufficient resolution. Finally, one night she took the bread knife and inflicted a wound on the arm of one of her boys, which one she could not remember. Here ends her recollection of any further

steps in the tragedy, except her horror at the sight of blood and her removal to jail. She really killed, at this time her youngest boy and wounded each of her other children, also inflicted several wounds upon herself. While at the Danver's Lunatic Hospital, later, she had three dizzy spells in which there was slight loss of consciousness and subsequent mental confusion, although she had no delusions, nor did she, while there, manifest any peculiarity of conduct. Dr. Stedman concludes that this is a case in which "A melancholic epileptic wounds with homicidal intent, her son, and seeing the blood flow, loses consciousness and then continues automatically the act once begun" He further quotes Dr. Magan who says: "In some cases the epileptic ictus does not interrupt an idea, or rather an insane tendency, and those subject to virtigo continue an act once begun. In the same manner, an epileptic can follow an idea in which, at the moment of seizure, he is absorbed, without his mind (so to speak) being concerned in it."

Echeverria further remarks: "That there is no difference between the thought, or any emotion, or feeling of animosity, that might take hold of the mind before the onset of the attack, and the same idea or feeling vividly renewed with blind persistency during the period of unconsciousness and automatism coincident with or rather constituting when not actually prolonging the fit."

In considering the mental condition of epileptics, and especially their responsibility for criminal acts, it is of



the utmost importance to distinguish between the real motiveless outbreaks of epileptic insanity accompanied by impairment of consciousness and temporary loss of memory, and the exhibitions of irritability and temper so frequently met with in this class of cases. In other words we must distinguish between attacks of true epileptic mania and outbreaks of conscious anger in an epileptic, in the latter, deliberate acts of violence may be committed for which the individual should usually be held responsible, at least in a limited degree.

In this disease the mental controlling power is usually weakened while patients are quite susceptible to external impressions. As a slight cause is often sufficient to overcome the inhibitory power of the motor centres with a resulting convulsion, so a word, a look, or the most trivial circumstance, is sometimes sufficient to provoke an outbreak of noisy rage, during which the patient may do violence to others. Irritability, aversion to control, and impulsiveness, are marked characteristics of the epileptic psychosis, but it by no means follows that these patients are not at times amenable to discipline, or that they are to be considered irresponsible for every mischievous or criminal act which they commit. Of course, there are many instances in which the moral nature is practically obliterated ; in these, and in cases of true epileptic mania, there can be but little doubt as to their irresponsibility for acts committed while in this condition. Other cases in which the moral and mental degradation is less marked, furnish some of the most difficult of medico-legal problems,

and it is only by the most careful consideration of every motive and circumstance bearing in any way upon the case, that a trustworthy decision can be reached. Each case must be considered independently of all others—for example: I now have under my care a young gentleman and a young lady of nearly the same age. The former under treatment, has had no epileptic attacks for over two years, yet he is utterly unreliable, will lie and steal upon every occasion, and such is the moral degeneracy, that should he commit violence, he should not, in my opinion, be held responsible. The young lady, on the other hand, has severe attacks nearly every week, sometimes lasting for days, and which have thus far resisted every form of treatment. While she is ordinarily very lady-like in her behavior, still she is sly, cunning and untruthful, yet, I regard her as responsible for her actions, during the intervals between the epileptic attacks, and accountable to the law for criminal acts which she may then commit.

Another mental condition, occasionally met with in epileptics has, so far as I know, attracted but little attention. Several cases have come under my observation, in which mental disturbance followed the cessation of attacks under treatment. In one instance, a young gentleman of 18 having several severe convulsions daily, was sent to me with the request that in treating him, I abstain from the use of bromide of potassium, as previous attempts in the use of this remedy, had caused insanity. After watching the case carefully for several days, I decided to resume the use of the

drug, at least temporarily, in doses of about 50 grains daily. The convulsions at once ceased and have not since returned for a period of about two and a half years. Mental excitement, however, soon appeared, accompanied by sleeplessness and by the most violent exhibitions of temper and intolerance of any attempts at control; the slightest irritation was sufficient to excite a paroxysm of noisy rage, although no delusions were present. Notwithstanding the mental disturbance, the original plan of treatment was steadily followed, combined with remedies to allay the mental excitement. A few month's perseverance on this line accomplished the desired result, and his mind gradually returned to its normal condition. He has been for years, and always will be, feeble minded, but there has since been no return of the mental convulsion.

Another case was that of a young lady who was sent to me from New Jersey. On her arrival she was maniacal, had various delusions, and was quite difficult to manage. She was then undoubtedly in a state of bromism, which for a time gradually grew worse. She has now been under my care for over a year, and during this time the bromide treatment has occasionally been entirely suspended for varying intervals of time with the immediate effect of increasing the frequency of the attacks while the mental condition materially improved; a return to treatment even in doses of 45 grains daily was always followed by a return of the mental disturbance, although each time with lessened severity. I decided to continue the bromide for several months

together with nerve tonics, good food and an abundance of out door exercise. The result has been a greatly lessened frequency of the attacks, while the mental condition has gradually improved. Another patient, a young lady of 25, had for years a weekly convulsion, preceeded for hours by an indescribable dreamy feeling. These attacks were at once almost entirely controlled by treatment, but considerable mental confusion supervened and she was unable to perform mental acts which had previously given her no trouble ; she could not read with comfort, could not write correctly, while the peculiar aura was constantly present. The anticonvulsive treatment was however patiently followed and she has now completely regained her normal mental condition and very rarely has a convulsion.

These cases are, I think, sufficient to illustrate the statement, that anti-convulsive treatment should not be too readily abandoned in epilepsy when mental disturbances follow the cessation of the attacks. In these cases the brain has become accustomed to excessive discharges of nerve force which occasion muscular convulsions ; when this tendency is controlled by treatment, the equilibrium of the nervous centers is, for a time, destroyed, the discharge then becomes mental rather than motor and there is a convulsion of ideas instead of a convulsion of muscles. If the anticonvulsive treatment is combined with cod-liver oil, phosphorous and other nerve tonics, together with good food and plenty of out-door exercise, the brain will, I think, gradually regain the condition in which it was before the convulsions

were controlled. Of course it is important to discriminate between this condition and that which is occasionally produced by the administration of large doses of the bromides, but in the majority of instances, I think it will be found that the mental disturbances are caused by the cessation of attacks rather than by the remedy. In the cases I have referred to only comparatively small doses were given. Many of these patients will, however, need to be removed from home for treatment by themselves.

In conclusion I would remark—

(1.) That attacks of mental epilepsy, may precede, follow, or take the place of severe or slight epileptic seizures.

(2.) Attacks of epileptic mania are usually unpremeditated, motiveless, and accompanied by impairment of consciousness and temporary loss of memory. During this period the individual is irresponsible for his actions.

(3.) It is possible for an epileptic to automatically continue, during an attack, an idea or action begun just before the onset of the paroxysm.

(4.) It is important to distinguish between attacks of true epileptic mania and exhibitions of irritability and violent temper in an epileptic. Le Grand-du-Saulle further remarks: "The patient who has clearly committed an attempt when not suffering from an attack is

partially responsible, but he has the right, after examination into his mental state, to an extenuation of the penalty, and in some way proportionate to the degree of moral resistance which can be opposed."

(5.) The question of responsibility of an epileptic in criminal acts should be decided by a commission of medical experts appointed by the Court for this special purpose. This commission should make its examination and report previous to the trial.

(6.) Various mental disturbances may occur in an epileptic upon the cessation of attacks under treatment. These may have no relation to the drugs administered for the relief of the convulsive tendencies.



