X

Epileptic Insanity

E. H. Warner

Any one at all familiar with Lunatic Asylums is aware that a considerable portion of the inmates of such institutions are the subject of Epilepsy, & having myself been employed for some little time in Asylum practise I propose in the present paper to give some account of this disease in its relation especially to the production of insanity.

Epilepsy must be considered to rank prominently among the predisposing causes of insanity &, various as are the classifications proposed for mental disease generally, we find that all writers on the Subject are agreed in making a separate division of the intellectual derangements related to Epilepsy. The term Cerebral Epilepsy has been applied to the paroxysms of insanity associated with Epilepsy & so close is the relationship between the physical & psychical elements of the disease that some writers are of opinion that the paroxysms of insanity & the ordinary convulsive phenomena occurring in Epileptics are only different manifestations of the same pathological condition.

Falret has gone further & attempted to establish an intellectual grand mal & petit mal closely corresponding to the physical grand mal & petit mal respectively. Such correspondence however is far from being universally present, & as a matter of fact, the most furious paroxysms of rage or frenzy may follow an attack of petit mal or may burst out without any visible attack at all, while fits of grand mal & petit mal occurring separately or together may often herald a harmless insanity with the highest

degree of dementia but without the least violent reaction, which, according to Falret, should occur exclusively upon the physical ground work.

According to Reynolds mental failure in epilepties would seem to depend upon a peculiar condition of brain induced coetaneously with that which is the cause of the paroxysms. "That the cause of mental" "failure", says this writer, "is not identical with that" "which induces the attacks is evident from the perfect" "intellectual integrity of some who suffer severely" "from the paroxysms & also from the absence of all direct" "proportion between the degree of impairment & that of" "exalted excitability. That its cause is however closely" "associated with that of the attacks is to be inferred" "from the fact that the degree of failure does bear direct" "proportion to the frequency of the latter. And we may" "further gather that its relation is more close to that" "element in the causation of the attacks which induces" "loss of consciousness than to that which causes the" "convulsion, since it is with the petit mal that" "intellectual deterioration is associated more intately" "than with the violent paroxysms."

For these reasons then I think we shall be nearer the truth if, instead of attempting to establish any immediate relation of cause to effect between the psychical & physical paroxysms, we regard epileptic insanity as one of the manifestations per se of the spasmodic neurosis, recognizing its essential source, not in this or that kind of fit, nor in their frequency, but in the very pathogenetic element of the disease.

Unconsciousness with an excessive reflex susceptibility to external impressions displays itself as the chief

characteristic of the psychical as it does of the physical paroxysms of the disease & forms as it were a connecting link between the two - If we examine into the mental phenomena accompanying epilepsy we find there is 1/ an exalted susceptibility to external impression 2/ An aura affecting some of the external senses but not necessarily connected with these impressions. 3/ Coma 4/ Excitement or fury & the performance of automatic acts 5/ An abnegation of consciousness during all these conditions 6/ Partial enfeeblement of powers of which the patient alone may be aware 7/ Dementia. And though these conditions differ widely in degree & duration & are not necessarily met with in every case, still, in whatever way they are combined however brief they may be, the characteristic psychical element to bear in mind is the imperfect or suspended consciousness - In other words there is a cessation of that thought & emotion which regulates our rational acts, of which the mind takes cognizance & which are preserved by memory. In answer to the question, does epilepsy necessarily entail insanity? I think the general evidence goes to show that while there is no necessary connection between the two, yet that in the large majority of individuals in whom the disease persists after puberty the mind does sooner or later become seriously impaired - There may be, it is true, a certain number of those subject to the disease who pass through life without suffering any sensible diminution in mental capacity & power; but even in these, though symptoms of ~~insanity~~ actual insanity may never exhibit themselves to a sufficient extent to warrant restraint

in the Asylum, the recurrence of fits tends sooner or later to produce important modifications in their moral & intellectual condition; the effects of the disease being manifested in a diminution of the power of self control, in a perversion of the moral feelings, the instincts, in excessive irritability of temper & a general instability of character which seriously affects them in their various relations of life.

The presence of insanity usually implies an advanced state of the epileptic malady, but it may & does sometimes appear at any time throughout its progress. For instance an attack of furious mania may accompany the very first epileptic seizure, while in other cases the occurrence of a train of mental symptoms, essentially epileptic in their nature, may be the first indication of the existence of epilepsy. Insanity however seldom occurs before puberty, & as proof of this may be adduced the age of Asylum Epileptics. In one institution with which I have been connected & in which there were between 500 & 600 epileptics there were not more than 4 who had not reached the ~~age~~ period of puberty before admission. The reason for this I think not far to seek. So long as the brain is growing rapidly & the cranial walls are comparatively yielding, the faculties of the mind may go on developing in spite of the occurrence of the fits, though not perhaps to their full extent; & the child, though he may be somewhat backward, wayward & peculiar, still grows in mental as well as bodily stature. It is only after puberty has been reached when growth becomes slower & the skull is consolidated that the baneful

Effects of epilepsy upon the mind manifest themselves. Then it is that the disease becomes obviously disastrous & entails the decay of the newblown faculties.
The intellectual disorders observed in epileptics may, for the purpose of description, be divided into 3 principal categories :-
1/ those which manifesting themselves in the interval between the attacks are independent of these & constitute the habitual mental state of epileptics
2/ those which occur temporarily before, during or after the attacks
3/ those intellectual disorders more or less prolonged which, coming on in paroxysms independent of either convulsive or vertiginous phenomena, most especially deserve the name of epileptic insanity.
To the first class belong all those cases in whom there is no complete recovery of intellectual soundness between the paroxysms but in whom mental deterioration persists throughout & is not essentially modified by the recurrence of their fits - In these patients imbecility & dementia & a range of symptoms very similar (at least in the later stages) to those of General Paralysis of the Insane are more noticeable than the unconsciousness with excessive irritability & sudden violent acts observed in other epileptics.
To a casual observer many of the least afflicted among these would not perhaps appear to suffer any further effects from their fits beyond a transitory Stupor & mental hebetude immediately succeeding the paroxysms; to those however who have an opportunity of observing them for any length of time it soon becomes evident that they are the subjects of grave

mental deterioration - These mental changes exhibit themselves in an extreme variability of temper & disposition & in a strange irregularity in the state of their feelings as well as in the degree of their intelligence.
These irregularities of feeling & intelligence are necessarily reflected in the talk & in the actions of such patients & are the cause of the excessive variability in their behaviour to those about them.
The history of these individuals is often somewhat as follows:- For a certain period perhaps of their lives they are laborious, punctual & attentive to their duties & those who live with them or who employ them find their intercourse agreeable & are pleased with their services. But at other times their conduct becomes suddenly modified & presents the greatest irregularities - they are then incapable of fulfilling the duties confided to them & become negligent, lazy & indolent. They forget the most elementary things, waste their time, wander here & there without aim or object in view & are themselves conscious of the vagueness & confusion of their ideas. The most deplorable tendencies & the worst inclinations develop themselves in them at the same time; they become liars & thieves, they pick up quarrels with those around them, complaining of everything & everybody. They are very easily irritated by the slightest cause & frequently commit sudden acts of violence which in most cases have not even the excuse of provocation on the part of the victims to these acts.
Such patients though they may not at first exhibit gross symptoms of insanity are, for the reasons just detailed, incapable of taking care of themselves or

of learning a livelihood. In other words they are imbeciles and as such are pretty sure sooner or later to find their way to an Asylum.

From simple imbecility they may go on to a state of more or less complete dementia. This condition is the natural termination of epileptic as of all other forms of chronic insanity. In it the various faculties of the mind are all partially or completely obliterated & the individual leads in many instances a purely vegetative existence. The memory appears to be the faculty which is most frequently & the earliest affected, & the character of the change is this, that the individual, though capable of recalling some impressions (especially those received in periods long since passed), is not able to remember the little events & circumstances of the day & the hour before. Dr Pritchard ascribes this failure of memory for recent events to the want of power of attention evinced by these patients. He says:- "The disorder of mind consists" "not in defective memory of the past but in the inca-" "pacity for attention & for receiving the influence of" "present external agencies which (in a different state" "of the cerebral organization would) have produced a" "stronger effect upon the sensorium & excited sensation &" "perception." But attention is obviously an act of the will, & this defective power of attention resolves itself into impaired volition. The epileptic may have a power-ful will, a fact to which anyone who has had to do with them can testify, & he may exercise that will at times to the extreme of obstinacy; & yet his will is inoperative in the little affairs of daily life & these make no impression upon him. The secret of this loss of memory lies in the loss of motive or desire. The

desire being too feeble to call into exercise the voluntary act of attention, impressions received from without are but faintly registered & imperfectly remembered.
But while the memory is the faculty most frequently at fault it is not the only one affected. We find the judgment of such individuals defective. Any association of ideas becomes to them difficult or is wholly beyond their power; while their power of determination is lost, entailing a want of motive in their actions & the loss of control over their emotions & passions.
These demented individuals are much given to wandering about aimlessly & collecting all sorts of rubbish which they stow away in the recesses of their garments or carry in bags round their necks. If spoken to they only reply with a vacant stare or perhaps will repeat the word or phrase addressed to them. This "echo" as it has been called of a word or phrase addressed to them or present in their mind is, it may be noted, another indication of the perverted will in epileptics.
The phenomenon renders itself very evident in the writings of the epileptic insane & affords confirmation of the automatic repetition of motor & intellectual acts so peculiar to epilepsy. The worst cases are exceedingly dirty in their habits; they eat ravenously & have no control over their evacuations, this latter failing being more the result of paralysis of the will than of the sphincters. Hence we find many of the "dirty & dirty" cases in Asylums are epileptics.
The second class of mental disorders embraces those which exhibit themselves before, during or after the fits. When occurring before the fits they may precede them by an interval ranging from a few hours to a

prodromes - They vary very much in their nature, but, whatever form they assume, they are, as a rule, invariable in the same patient; that is to say, in a given individual the same symptoms occur before each successive fit or series of fits. So true is this that in many instances the patients or their attendants know at once from these prodromal signs that fits are impending - Extreme irritability of temper is a very common precursor of fits. It may last for several days & amounts sometimes almost to mania. An acute attack of mania is however rare immediately before a paroxysm of convulsions. It generally culminates in a single fit or in a series of them & it is remarkable that the occurrence of these seems in many instances to relieve the mental disturbance, & the patient, after remaining for a varying period of time in a state of torpor, emerges from this condition in a normal state of mentalization. This is more especially likely to happen if the patient sleep after the fit. In some cases the occurrence of fits is foreshadowed by various eccentricities of conduct on the part of the patient. One, for instance, who is usually gay & sociable becomes suddenly & unaccountably sullen & despondent, sitting apart from his fellow patients & resenting any attempt at conversation. Another will exhibit an exactly opposite demeanour, becoming inordinately gay & facetious, officiously meddling with his neighbours & obtruding himself upon every possible occasion - Others again appear to be dominated by intense religious sentiments often associated with erotomania - They will quote verses from their Bibles, sing hymns & repeat prayers in the most

ostentatious manner. Perhaps the most typical of all is the querulous & peevish patient who is always complaining & whining like a spoilt child, never satisfied but always complaining of something or somebody. They are often suspicious of their neighbours. I remember one man who when he felt "fitty" would invariably place his treasures in the safe keeping of one of the attendants fearing they might be stolen from him while in a fit. They are often at considerable pains to find a secure hiding place for their belongings & after they have recovered from the paroxysm may be heard accusing some neighbour of stealing them from their person, being themselves totally oblivious of what they did immediately before the attack came upon them. One might add infinitely to the catalogue of strange acts performed by epileptics in their so called "fitty" condition. The various personalities which have already been mentioned as characterising many of them are constantly involving them in trouble with their neighbours & lead to acts of recrimination & it needs almost the wisdom of a Solomon to be able to settle their numerous petty differences to the satisfaction of all parties.

Hallucinations especially of sight & hearing are very common in these prodromal stages & it is important to remember that these hallucinations are frequently associated with ideas of violence & terror. Thus it is not uncommon to see extreme terror depicted on the countenance of some patient just before a fit & they will often tell you that they felt overwhelmed by a vague sense of some

impending disaster which they may not be able to define but which is sufficient to account for many of their actions. One pretends will run as if to escape some imaginary danger, another is impelled to take hold of some one as if for protection. They will often bring unfounded accusations against their attendants & fellow patients of being the cause of bruises & other injuries they may have sustained during a fit & many of their after acts of violence may & think be reasonably looked upon as acts of retaliation for imaginary wrongs done them.

As already mentioned, when the convulsive paroxysm has expended themselves the psychical atmosphere (if one may use the term) seems sometimes to be cleared by the storm & the patient may, after a certain period of prostration, return to his normal mental state; but though this may occur in some instances, in others the fit is followed either immediately or after a short interval by an acute attack of mania, which, for violence & intractability, is unequalled in any other form of insanity. The distinguishing features of epileptic mania are the extreme suddenness of onset & termination of the attacks the violence & impulsive nature of its acts & its short duration as a rule. But though of short duration it is sometimes most disastrous in its consequences while it lasts. The most fearful crimes have been committed during attacks of epileptic mania & these patients admittedly constitute the most dangerous class of lunatics when in

their excited state. They will sometimes make most unprovoked assault upon inoffensive individuals who may happen to come in their way, & notwithstanding the impulsiveness which characterises their acts as a rule, cases are on record of deeds of violence committed by epileptics which have every appearance of being the result of premeditation. This naturally has an important bearing upon the medico-legal aspect of epilepsy involving as it does the question of responsibility for their actions in the sufferers from this disease. It is not my intention in this paper to enter upon any discussion of the legal relations of epilepsy. It is a subject upon which there has been much controversy between jurists & medical men upon which the opinions of experts are still far from being agreed. It has been alleged by jurists that those who plead irresponsibility for epileptic claim for them on that account exemption from the rigours of the penal law, are principally those who have been associated with the disease in asylums, & that their views do not represent the opinion of the medical profession at large. This may be true, but it is so, I think, not because medical men in asylums allow any morbid feelings of humanity to bias their judgment & obscure their sense of duty to society at large, but because men in their position naturally enjoy, as specialists in their subject, opportunities of studying the mental aspects of the disease which are denied to the majority of their brethren. Bearing in mind the reflex nature of the physical

& mental phenomena inherent in epilepsy it follows as a matter of course that epileptics should be regarded irresponsible for any criminal act committed under the influence of a paroxysm. Those familiar with epileptics know that the majority have no knowledge or at least a very imperfect idea of their misdeeds such state of unconsciousness being the chief characteristic of epileptic insanity generally. This unconscious celebration though exhibited to a high degree in epilepsy is not, however, peculiar to it, for we observe it more or less in other forms of insanity & notably in somnambulism. Before therefore we can fully appreciate or decide upon the nature of any act perpetrated during an alleged condition of epilepsy it is indispensable to have a clear demonstration of the above-described phenomena. Even under such circumstances in the present imperfect state of our knowledge as to the precise nature of the psychical condition involved in epilepsy, the difficulty in determining precisely where responsibility shall end & irresponsibility begin, is great, & each case must be decided upon its own merits.

I have still to speak of those mental Symptoms associated with epilepsy which I have placed in the 3rd category, viz those which occur periodically in close proximate connection with any fit of grand mal or petit mal. This is the epilepsie larvée or masked epilepsy of Morel who was the first to point out their true epileptic origin of such attacks. This writer observed in certain individuals in whom

there were no manifestations of the ordinary external symptoms of epilepsy, periodical attacks of excitement occurring at regular intervals closely resembling in their nature the attacks of mania so often associated with epileptic seizures. These occurred very suddenly, were very violent while they lasted, terminating as suddenly as they commenced & were followed like ordinary epileptic mania by a period of prostration. Such cases he found moreover often developed later on true epileptic seizures thus confirming his views as to their real origin & nature. The discrimination between these attacks of larvated or masked epilepsy & other forms of recurrent mania is rendered easy by a reliable account of the antecedents of the patient. The demonstration for instance of parents stained with any constitutional nervous disease or addicted to intemperance, an extreme susceptibility to anger with strange peculiarities of character, moral depravity & more or less dwarfed development of the intellectual faculties, in addition to the onset of fits during infancy or adolescence with subsequent vertigo or fainting fits, are elements of diagnosis which since the true epileptic nature of any transitory instinctive or mental disorder that has recurred without variation or with such a complete resemblance to the preceding paroxysms as we notice but exceptionally in any other kind of mania.

Pathology - In enquiring into the manner in which epilepsy operates upon the brain so as to produce insanity it is necessary first briefly to consider

What happens during the various stages of the paroxysm which characterises the disease.

In the 1st stage then we have that increased excitability of the medulla oblongata in which the disorder essentially consists, leading to spasm of the vessels of the brain with temporary deprivation of blood to general connection of the nervous elements very inimical to their healthy activity.

In the 2nd stage in which clonic convulsions occur we have venous congestion & pressure on the brain due to spasm of the muscles of the neck & stricture of the muscles of respiration & we may have the breaking up of the structure of the brain by a multitude of minute or a few large clots.

In the 3rd stage in which coma remains we have poisoning of the brain by imperfectly aerated blood

In these morbid conditions of the brain corresponding with the steps or stages of the epileptic attack are contained the origins of all the pathological alterations in the cerebral hemispheres found in connection with epilepsy. It must be understood that the changes which come under observation in the post mortem room of an Asylum are necessarily chiefly associated with advanced cases of the disease since those mental complications which are held to justify the deprivation of liberty are not usually developed until epilepsy has held possession of the nervous system for many years, & life is often far protracted after seclusion in an Asylum has become necessary.

What then are the changes most constantly found in the brains of those epileptics who have laboured

under mental aberration? Speaking generally they are the following; a hardening of the medullary matter throughout the whole encephalon, dilatation of the bloodvessels & a ~~ray~~ colour of the grey matter of the convolutions. These are not however found in every case; in very recent & in very advanced cases they need not be looked for; in recent cases they have not been fully established, while in very advanced cases they are not found, at least not in a marked degree, because ulterior changes springing out of them have obliterated them. The serious failure of brain power which is sometimes seen in very recent cases is to be traced, not to hypertrophy & induration of the organ, to which the same kind of failure a little further on in the disease is ascribable, but to a molecular perturbation analogous to what happens in concussion. The brain is suddenly thrown out of gear by the spasm in the contractile fibres of the vessels & has not time to recover itself before it is again deranged by a recurrence of the spasm. That this is so seems to me to be indicated by the fact that deep dementia has been observed to follow a series of attacks of petit mal in which no clonic convulsions or cerebral congestions occured, but merely momentary unconsciousness with pallor of the face. It is a well known physiological fact that pressure & hyperæmia lead to hypertrophy & this particularly when the pressure is of an interrupted character & only occurs from time to time - Continuous pressure produces atrophy - We find this law exemplified in the

effects of epilepsy upon the brain. The first effect of the interrupted pressure which is applied to the brain appears to be a genuine hypertrophy & augmentation in volume. This hypertrophy, in the brain as in other organs, is manifested chiefly in the connective tissue. A kind of fibroid substitution slowly but surely goes on in those parts which are periodically subject to congestion & induration. We see evidence of this in the thickening of the bones of the skull, in the coarse hair & thick skin covering the head & necks of epileptics. I may here mention, in respect of this hypertrophy of the tissues, that scalp wounds heal with great readiness by first intention in epileptics a fact no doubt due to the increased number of blood vessels engendered by the hypertrophy. I have had frequent occasion to notice this & subject as these patients are to violent blows & injuries of various kinds, I can only ascribe the comparative immunity they enjoy from fracture of the skull to a corresponding increase in the thickness of the bones.

The brain of a chronic epileptic is unusually dense & hard. When cut it feels tough & firm to the knife; the grey matter is dark in hue & the white substance glistening in appearance; while the convolutions are flattened & the sulci, instead of gaping as they usually do & containing fluid, are become mere lines. In those in whom a series of attacks has immediately preceded death there may be a spotted blotched appearance of the medullary substance, while

in the very advanced cases there may be some atrophy or wasting with opacity of the arachnoid; the atrophy being due to the contraction of the hypertrophied fibrous tissue.

It will be seen that the above post mortem appearances do not throw much light upon the precise nature of the cerebral change upon which mental failure depends. They show however that the nutrition of the cerebral lobes does in some cases become impaired & the influence from symptoms would be to the same effect. The impairment is due in all probability to the changes ~~in~~ which the epileptic conditions induce upon the nutrition through the vasomotor nerves. The circulation in the brain proper is under the control of that portion of the reflective centre in which epilepsy has its seat & through changes in the latter the former becomes deranged. Anaemia of the brain is the essential phenomenon of the petit mal & this, followed by the toxic effect of the venous blood, is also present in the grand mal; yet persistent mental failure does not result from these paroxysmal changes. But the conditions which cause these are to be regarded as the source of that failure operating slowly & progressively as the disease goes on, but in some cases ~~but~~ commencing with its commencement & in others producing most marked deterioration even before any paroxysmal phenomena have been observed.

Treatment The treatment of epileptic insanity resolves itself in great measure into the treatment

of Epilepsy itself, for if we can remove the neurosis which causes the convulsions & vertigo we shall at the same time also remove the condition upon which the development of mental disorder depends. Reynolds has shown that mental impairment in Epilepsy holds a close relation to the frequency & recurrence of the seizures. Hence our first object in treatment should be to effect a diminution in the number & frequency of these. To attain this we may have recourse to drugs which exert a sedative influence upon the undue excitability of the reflex centre in the medulla oblongata in which the neurosis essentially consists. Facile princeps among such drugs is Bromide of Potassium. Dr Clouston has in a careful series of experiments conclusively shown that this drug, exhibited in full doses of 30 grs three times a day, 1/ very considerably reduced the total number of fits 2/ Reduced the severity of the fits even when their total number remained the same 3/ greatly improved the mental condition reducing the number of maniacal attacks & diminishing the nervous & mental irritability & tendency to sudden violence 4/ In some cases produced mental improvement even while the fits remained as frequent as ever. Opium is sometimes of service in putting off the attacks but it is doubtful if it exerts any permanent influence. It must be given in small doses either by the mouth or preferably by hypodermic injection. In my experience it is chiefly of use as a sedative for those numberless aches & pains & indescribable sensations to which so many chronic

epileptics are prone & whose mitigation of which renders their lives less burdensome perhaps than they otherwise would be.

Hyoscyamus given in large doses viz 3iv of the Tincture will sometimes quiet the maniacal excitement & the same may be claimed for Belladonna & Cannabis Indica but to a less extent & these drugs are at best uncertain in their action. In one asylum in which I was resident the routine practice was to give a mixture of Tinct. of Aconite & Tartarated Antimony to epileptics but I could not detect any material advantages accruing from this method of treatment.

The old method of counter-irritation in the form of blisters & setons to the head & neck, though now looked upon as a somewhat barbarous treatment, was no doubt of service in many cases & it is a matter of common observation among epileptics in asylums that the existence of a large open wound or sore often while it lasts exerts a beneficial influence upon the frequency & severity of the fits, & the same may be said of organic diseases such as pneumonia, pulmonary phthisis &c, the fits sometimes disappearing entirely during the continuance of the disease but recurring again as soon as the "counter-irritation", as it may be termed, is removed.

Even if we cannot hope to cure the patient much may be done to relieve his symptoms by attention to his general health. His diet should be carefully regulated to avoid any disturbance of the digestive functions. Regularity of meals & strict at-

attention to the habits should be rigidly enforced. Warm clothing to promote the action of the Skin is useful & the patient should always sleep in a warm & well ventilated room. A fair amount of bodily exercise is essential & a moderate exercise of the mans mental faculties should be encouraged. A certain amount of recreation is beneficial, so long as this is not of a nature calculated to appeal too much to the emotions & passions, excitation of which is very apt to bring on fits. As to the moral treatment of Epileptics it need scarcely be said that kindness & consideration with firmness do more toward restraining their outbreaks than any amount of mechanical restraint, though this latter may occasionally be absolutely necessary both for the sake of the patient himself & of those around him. I do not believe in indiscriminate seclusion, but from what I have seen I am sure that positive harm is sometimes done by the excessive zeal exhibited by some asylum officials to prevent the bugbear seclusion appearing in the Asylum records. Means for the constant Supervision of Epileptics are now being taken in most of our Asylums but to be of any service the System must be thorough & the means of ascertaining the constant vigilance of the attendants should be efficient. I do not believe in herding all the epileptics together in large ward as is done in some Asylums & think that 60 to 70 patients is the largest number that should be allotted to one ward. If larger than this they become wildernesses in which it is

very difficult to maintain proper Supervision. Fortunately cases of Suffocation of patient from turning on the face in bed during a fit are not of common occurrence but statistics seem to show that the system of Constant night Supervision has proved beneficial in reducing still further the number of accident from this cause -