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Remarks on Epilepsy

Henry Milner
It is scarcely possible to frame a definition of epilepsy which shall take in all its various forms, the modifications to which it is liable, depending as they do so much upon the exciting cause, the state & habits of the patient.

It will therefore be necessary to describe some of the more ordinary phenomena of epilepsy, so as to take a type of the disease for a standard by which to judge the modifications or variations from its usual course.

The ordinary leading symptoms of an epileptic paroxysm or fit are a state of clonic spasm with a temporary loss of thought & volition & in the severer cases oppression & embarrassment of the respiratory & circulatory functions — generally arising when the patient is in an apparent state of health & leading in stupor & sleep. They are immediately followed in investigation & observation two distinct forms in which it commonly presents itself — a milder & a severer form; the epileptic convulsion or the epileptic convulsion or as they are called by the French, "The Petit and Grand Mal." The Epileptic Cholera or Grand Mal is subdued in by the patient, apparently in the enjoyment
of perfect health, suddenly uttering a loud cry or scream; falling instantly to the ground, totally bereft of sense and feeling; the whole frame is shaken with violent convulsions which are irregular, strong, and generally convulsive. The first effects of the spasm are a peculiar twisting of the arch; the chin being raised and brought round by a recession of jerks, which thrust the head towards the side, generally the right; the features become fearfully distorted, large and wide; the eyes half protruded from their sockets and are sometimes turned up beneath the lids so that the cornea cannot be seen; the white sclerotic coat alone being visible; the teeth are grinded together, portions of the tongue and cheeks being often bitten by them until the mouth is filled with a bloody froth, which flows over the lips, adding to the horrible appearance of the patient. The breathing is laboured, sometimes almost suspended; from the chest, being furred by the spasmodic action of the muscles of respiration, which also frequently leads to the expansion of the inner and outer parts during the violence of the fit. This operation
Contraction of the muscles has been known to cause the dislocation of bones even the fracture of teeth. As the fit increases, the limbs are clutched about in all directions; the temperature is generally below the natural standard, the hands and feet invariably being cold and they continue so throughout the whole of the paroxysm; whereas as the paroxysm diminishes the head, neck and throat become warmer and turned; this tremidity is due to the stopping of the brain's circulation and rapidly increases and the colour of the portions of the body changes from a pallid and blue to dark blue always indicative of brain congestion. The pulse is scarcely to be felt at the wrist, although during the whole of the paroxysm the heart pulsates with great violence. During the fit there is entire loss of consciousness and tenderness, the most piercing stimulant failing to excite the senses. By degrees however, the violence of the fit abates and these alarming phenomena gradually diminish; the limbs, instead of being clutched about with violence, are
Now only shaken by paroxysms, the
almost asphyxial state of the breathing is
allayed and its natural regularity only
interrupted by sobs and gasps. All this
by degrees pares off and the patient without
becoming sensible falls into a comatose state
in which the breathing is loud and stertorous.
The nervous system is now relieved from
fatigue and becomes unloaded, the color
and the regularity of the heart and pulse
return and the patient wakes in the course
of a short time to a state of consciousness
or imperfect consciousness which gradually
pares off and leaves him as well as before;
but he never remembers anything which has
happened to him during the fit.

Such are the leading features of
the worst form of epileptic seizure or
grand mal. One of its chief characteristics
appears to be the suddenness of attacs,
which is truly remarkable. In a moment,
in the earlier attacks, when least expected
by himself or those about him, often even
in the middle of a word or sentence
the alarming change takes place; the


For sufferers is dashed to the ground, insensible, struggling and foaming at the mouth. The fearful abruptness of the seizure is well expressed in the same given it be interpreted signifying a seizure of suddenivation.

But in some cases there were the distinct premonitory symptoms or as they are termed in speaking of this disease the aura epilepticus. The aura is evidently due to some modification in the sensation and circulation in and about the nervous centres or to functional disorders of some particular organ or nerves, which may probably form the exciting cause of the disease itself, or it cannot be doubted is the cause by which the convulsive movements are excited.

These premonitory symptoms occur according to frequent about five times in one hundred cases. It has been questioned whether their proportion is not too low. Watson believes that it is, but in some cases a fit does occur without an aura, in others again there is nothing which can in any
way be taken for a premonitory symptom. These auras sometimes extend over a considerable time before the fit makes its appearance, so as to give the sufferer time to place himself in the best situation for it to occur. In others there is only a momentary warning, the fit instantly following.

The aura is a sensation difficult to account for probably taking its origin from some change in the auras centers themselves and being of a strictly reflected character, a central impression. The sensation has often been compared to the crawling of a spider over the limbs or the slow trickling of water. These are generally felt at some distant part of the body, as in a thumb, or in some joint in the fingers, passing slowly along till it reaches the head or epigastrium, and when it has arrived there the fit often occurs immediately. In some cases the aura arises from old wounds or cicatrizes, or when part of the body in which such auras have been felt can be isolated from the brain, as by tying a ligature tightly around the thumb, the fit
has been occasionally presented — at other times the patient will experience a variety
of aqueous disorders, as for example, he may feel prostratistically weak, cheerful and high
spirited or he may be fidgety, tremid or inmull — often the intervals of special sense
appear to be disturbed in function; as for instance, he sweet odours for disagreeable
smells or the converse — the taste may be altered — he may hear extraordinary voices or
see various abatements or even fancy spectral illusions as St Gregory mentions in two or
three cases, or in the case of Michael J. Reilly — large flows of urine also often take
place —

A knowledge of these peculiar sensations is always of great advantage, as affording us in
some cases a means of warding off an approaching attack — It does not

follow however that because the head is

present or has made its appearance that

there will be a fit, as it sometimes happens

although no measures of precaution have

been taken for prevention, thought of, that

an Epileptic convulsion follows —
As the patient falls he sometimes utters a fearful scream, this occurrence is not by any means universal. This shriek may be voluntary or involuntary; in the former case there is momentary1 hearing, the patient may scream out with horror at the approaching attack; in the latter case where it is involuntary the attack is preceded by no warning and the shriek is due to the spasmodic contraction of the respiratory muscles forcing air through the partially closed vocal cords.

In the less formidable attacks of epileptic vertigo or Petit Mal, the symptoms are mild, but still well marked and in appearance at least to produce dangerous effects on the system, but when thoroughly investigated this is found not to be the case. The general symptoms are loss of power, diminution and embarrassment of consciousness, with slight elevation of the muscles, so that the fingers of the hand, but rare custody of both are moved irregularly and without object. The facial muscles of the face twitch, and
the eyes roll and are probably turned up. The pulse if felt is generally feeble and the surface of the cold and clammy. The impannany of the breath, as very often does the patient fall. These slight symptoms last but a moment, the faculties immediately return, the patient assumes the occupation in which he was previously engaged and in the earlier attacks is unaware that he has been interrupted on other occasions aware of what has occurred. He strenuously endeavours to conceal it from his friends. Every stage or variety of epileptic seizure has been observed, from the simple vertigo to the confirmed epileptic convulsions previously described. All these stages may indeed be met with in a confirmed case and although some patients are only affected by simple vertigo, yet there must not be overlooked or treated lightly, as in these cases they are no less dangerous than the more severe attacks. For we have the high authority of Tovell for stating that intellectual degradation
Seizure more constantly and more quickly among those afflicted with the epileptic form of epilepsy, than among those who suffer from the benign form of the disease.

The duration of the fits varies considerably. Sometimes it is brief before the seizure is

momentary, but even in the severe forms it is often over in a few minutes, rarely continuing more than half an hour, and probably the average duration does not exceed between five and ten minutes.

There are some attacks however which appear to last two or three hours. These generally consist of a succession of paroxysms with intervals of

complete exhaustion.

The interval between the paroxysms is also very variable, occasionally the patient despair in the first fit. In other cases there is no return of the fits. Such cases occur sometimes but rarely. Ordinarily, they return at irregular periods of a few weeks or months, often at intervals of a few days, occasionally every day or every day, and in a few cases they may be repeated.
Many times in the twenty-four hours. These cases in which they are so constantly repeated belong for the most part to the Milder forms of Epilepsy, i.e. the Petit Mal. In some forms of epilepsy the paroxysms assume a strictly regular period of return, but in by far the greater number of cases they are quite uncertain and irregular in the time of attack. Their return seems occasionally to depend on some sudden mental excitement, such as fear, anger, surprise, etc.

The time of life at which the disease is likely to appear, and any circumstances attending the development of the fit, especially at the commencement, deserve the greatest attention. In the generality of cases the accession of the paroxysms commences before rather than after the period of puberty, not consequentely dating their onset from the mental irritation, and disorders of the gastrointestinal tract, to which infants and young are especially liable during the time intervening between birth and the first dentition. These fits indeed
Although often mild in their character, and not in most cases likely to return, are apt quite indistinguishable in their phenomena, and in a few instances patients confirmed cases of epilepsy, and according to Dr. Ashburner they should therefore be reckoned among the protozoal forms of this disease; and it also be remarked by him, that if the early history of many adult epileptics could be traced they would often be found to have suffered when young.

The period of the second adolescence is also another time when this disease is likely to make its appearance, as is also the period of puberty. It more rarely develops itself in after life except as a sequel of organic mischief in the brain itself. It usually follows, growth of bone from the inner table of the cranium etc. The first fit has been known to occur without apparent exciting cause in patients of middle age or even later in life. But is before stated the disease usually makes its
Appearance before the age of puberty, the proportion being as ten to one.

Mrs. Schenck (summer) — George states that more than seventy per cent are affected before the age of twenty. Secret tables show that one fourth are attacked before five years of age — three per cent between five and ten — from 10 to fifteen and, from fifteen to twenty, about five per cent are affected. These last sentences state that the influence of temperature the periods of the first and second menstruation and the commencement of the menstrual discharge have been to much influence in producing epilepsy as is popularly and even by professional men generally belief. Theyhowever state that the number of married epileptics is small compared to that of the unmarried.

With regard to the sex in which epilepsy most frequently occurs it would appear from the reports of various hospitals, that the female sex is more liable to be affected than the male, in proportion according to English writers of about 128 to 98.
according to Dr. Kepler, in proportion of six to five — against me think that in eighteen hundred and thirteen there were also in the
Sabbath day 189 women to 158 men in
Riehen who were Epileptics. According
Dr. George in epilepsy hundred and twenty
the Members were 324 to 160—
With regard to the frequency and period in
the twenty four years in which Epileptic
attacks are likely to appear in between
another disagree. Thus Dr. Kepler was
of opinion that though the more violent
attacks came on at night, yet the majority
of fits is in the day, which opinion
is also borne out by the experience of
Marshall Hall, Bright, George. But
on the other side Sir Redcliffe, Walton
Mr. Lecourt thinks that the larger proportion
of the attacks during the night
Shane looks. Thinker that there is but
little difference as to the Watene much
of the attacks in the day and night
What Kepler's Table states that in
fifty the cases of fits came on solely
during the day in forty two, always
At night in eleven, and divided equally between the day and night in three—

The symptoms which precede the paroxysm are of much interest and of great moment; they are as already stated a gradual termination of convulsions, movements, the patient drawing his breath once or twice deeply. Flexibility returns. In a small proportion the patients are immediately themselves again; in others there is a slight return of consciousness and the patient falls instantly into a comatose state. But the majority do not recover their consciousness at the termination of the convulsions, but remain in a state of stupor which may continue for a considerable time—his the patient emerges from it, he is for a time languid and weak, apparently like a person stunned, oscillating in delirium and violent and the degree of paralysis is not completely present. He may perhaps remain, deny one leg or falter in speech. This is most cases soon passes off, but in a few cases it may remain during life.
In all cases there is more or less Headache and Discomfort of some kind. Patients never appear to have any recollection of what has occurred during the fit, and many would not even know it were it not for the attendant unpleasant circumstances, as the buzzing so often seen in these cases and the vast and idiotic state they occasionally find themselves in.

The predisposing causes of this disease may be Centre or Excentric, Central or General. The first question we should naturally ask ourselves is, is it or is it not hereditary? How there can be no doubt that it really is and that in a large majority of cases, for according to Eyjolf out of 400 cases which came under his notice at least in 100 the disease could be traced either to Father or Mother. Radcliffe thinks that too high a proportion and is of opinion that in one of every seven cases nervous disease of some kind or another might be traced to one or the other parent.
The shape of the head appears often a valuable diagnostic sign, as well as an exciting cause; thus Epilepsy is often seen with in patients whose heads are cone-shaped, or possessing in any way a peculiar configuration. Again it often attends in after life those who when young have suffered from Chronic Hydrocephalus. The hereditary diathesis is often a strong predisposing cause to this, as to many other diseases; some authors have even held that Epilepsy is often entirely dependent on Tubercular Matter deposited in the Membranes of the brain. More recently gives a table showing his division of the predisposing causes which may be useful.

1. Hereditary tendency
2. Anatomical conditions
3. Physiological conditions
4. Herbit or Antecedents

I have omitted one cause which he gives, as probably not having to much influence on the disease as he imagines, namely, Hygienic conditions. All these causes have already been more or less investigated.
The exciting causes are indeed innumerable among them may be mentioned fright, fatigue, anger, Wantonness & in too many instances what degrading vice occasion, lucrative epilepsy is often brought on by any thing which tends to change the Prime valve as obliteration, worm, engorged liver and irritation of the uterus a stone in the bladder or a gall stone has been known the produce Epileptic Convulsions, fits of delirium, 

The Propagation as may be supposed is most unfavorable, of this even the oldest authors were aware, for certain states that when once firmly fixed and rooted in the system, it only dies with the patient. Paulus Aegineta considered it capable of cure, without changing any distinction between Cậntri & Extrâcentri Epilepsy — Hippocrates states that it is durable with certain exceptions and says: 'Whoever is made acquainted with such things in man, and can make him hot or cold, dry or moist by diet, can also cure that disease if he can recognize a proper
reason for administering his Medicine.

The late Modern Authors have given very

shaded and doubtful opinions. Thus

Auffland says the prognosis is bad and the
disease next to impossible to cure. Chomel

days that Medicine is powerless towards
during Epilepsy. Dr. Leblat and Delaunaye
consider it as le désespoir de la médecine.

Dr. Herpin mentions the particular of sixty
eight cases collected with great care from
which he draws the following conclusions;

1st. That Epilepsy is rarely cured by the

efforts of Nature herself, although this

may occur in one twentieth of the cases.

2nd. that treatment is likely to produce a

favorable result in about half the cases,
treated and great alleviation in a large
percentage of the remainder. 3rd. One fourth
of the cases are incurable. This table

if it only stated the kind of Epilepsy,

whether due to Central or Accessory Causes
would be invaluable. But how can

be accurate conclusions in totally at

variance, except by supposing that there

authorities treated Patients in different
Circumstances of life, and this would appear to be the true explanation, that Mr. Esquiro, delirium and delirious patients were chiefly old and confirmed cases. While Mr. Espirito's whose practice seems to have been chiefly amongst the upper class, and in which many of the cases were probably due to evacuating causes. These facts would I think of properly weighed assist much in forming a correct prognosis, subsequent a case brought under our notice, a patient just past the age of puberty, who while in the enjoyment of apparently good health, with a sound and vigorous intellect, his muscular system unimpaired, and his abnormal configuration of the cranium to the seen or felt, is suddenly seized with a series of epileptic attacks occurring at intervals would it not immediately strike us that this might be a case of ancestral epilepsy dependent on some functional disorder, and might we not hope that by a judicious use of therapeutical means to overcome this tendency to recurrence, by removing the exciting cause, which if properly investigated
would probably be found situated in one or more of the important organs. Dr. Klessey is of opinion that the probability of a cure in Epilepsy may be judged of by the duration of attacks, which have already occurred in any case, and he says that a cure may be ensured to most patients, who labour under the petit mal, but that does not agree with Dr. Forster's experience, whereby that this slighter form is generally incurable and is more likely to lead to a complication of this disease with insanity. Dr. epidural says on the subject of Epilepsy, that it is a very and dangerous disease, rarely fatal in the primary attacks, is generally cured when symptomatic of visceral disease, seldom so when it occurs in the Centric form, although not always incurable. Those attacked during the periods of Latentia generally recover. Marriage only delivers General Epilepsy and aggravates other kinds. A pregnant female takes becomes Epileptic is always in great danger, when the fits increase in frequency and intensity, death is imminent. Death rarely takes place during labor of...
the convulsions, but generally in the period of depression which follows the attack, epilepsy combined with insanity is never cured.

If diseases liable to be mistaken for epilepsy hysteria occupies the first place, and the question may arise whether a case is epileptic or hysterical, the diagnosis in such a case may be affected by attention to general circumstances. That the sharp piercing cry of the epileptic is wanting although hysterical people generally scream but then it is continuous. The heavy comatose sleep of the epileptic is wanting and the aura is replaced by the Globus Hystericus. Hysterical people usually do themselves any injury, and go out into the street barefooted, and there is the foaming at the mouth, and the respiration in the hysterical is rapid and shallow, while in the epileptic there is forcible closure of the eyes, fluttering, and the patient is scarcely able to expire owing to a peculiar stertor and suffusion of the countenance like severe cold. Among the number of fish that disease...
Epilepsy, in many cases, is the result of the injury of the brain, and the person who has undergone such an injury is often able to obtain their discharge from the service and convicts to have their labours lightened. These may with proper care be easily detected, and the mendicant always chooses a favourable spot for his habitation, as in the crowded high way, or frequented streets. He is also careful to select a place to fall in, where he is not liable to hurt himself.

Again, the muscular effects of an Epileptic are far beyond the ordinary powers of a person of equal size or strength, able and wasted youths, requiring several strong muscular men to hold him down, an impostor could not of course exert that strength. Although he might imitate the act in some of its essentials very correctly. The pulse in Epileptics are often irregularly dilated and do not contract when stimulated by light. The pulse also is usually irregular, this cannot of course be imitated. There are also many species of crime is impossible, various means of detecting it. It is, however, unnecessary for
The treatment of Epilepsy, as that of many other diseases which have not been thoroughly understood or imperfectly investigated, has varied much from time to time and in the absence of a rational treatment, a treatment of the greatest empiricism has prevailed. Thus about fifty years ago, it appears that the remedies for this disease embraced almost all the drugs in the Pharmacopoeia of those days; since then they have increased, it might almost be said, with the discovery of each new remedial agent. It need not be said that the influence of those whose testimony is valued is quite against the idea of specifics. And if we look at the accounts of those who have at various times brought forward what they pretend to be specifics, we should find that almost every important drug has had its advocates. Thus Belladonna, Valerian, the mineral niter, and oxide of lead, each had their priests, and if we go back to the older authors we should find that they have not failed to bring forward other treatises of Epilepsy almost every disputing substance.
What can be named. And Dr. Cheyne makes the following pithy remarks in the Encyclopaedia of Practice of Medicine: Art: Epilepsy: "There are other obsessions of the same mind laboring to specify, the use of which Dr. Parke alleges when caught by manhood by the Devil, but without calling in question the actual analogy of our great enemy, the one of opinion that man when left to his own inventions is fully equal to the discovery of these and a multitude of therapeutic agents of equal inapetitude.

To cause I think be doubted that the true principles of treatment, are to be looked for in this, or in other diseases, in that state of vital functions which is necessary to health, for if their coordination be for an instant disturbed. Epilepsy, or diseases of a similar kind, will arise in these patients, who are naturally predisposed, or from cause which operating on certain organs which are more liable than others to disturbance and disarray the nervous system - and it would appear that nothing is so likely to locate disease of an Epileptic character as long continued and irritating thought probably as pure.
Diseases of the Mucous Membrane of the gastro-intestinal, pulmonary, or genital urinary tract.

The nature of the treatment of Syphilis is often taken eccentric character (for the question whether the centes variety is ever curable by any means which we possess, although even that form can be much ameliorated in its symptoms, by careful watching and attention to the prime care) is as follows: The intestines must be especially attended to and the diet regulated according to the state and constitution of the patient. Some authors advise a very small quantity or even total absence from animal food, others have prohibited all fermented liquors but it cannot be doubted that in their, as in other instances of the kind, that the most successful plan of treatment has been where the diet has been properly varied, a combination of mineral tonics with plenty of animal food and a moderate amount of stimulants if they are found not to disagree. In other cases a mild and tonics diet will be required. Exercise most of fatigue is of
Great value, as we all know, in assisting the nervous system to recover, is the proper regulation of the diet. Some of the mineral waters, when freely taken, have a decided effect on the nerves, and in particular the sulphate and arsenic of zinc. Sulphate of copper and nitrate of silver have been much used. All these ought, however, in large doses, gradually increased to large

... Mr. Herpin has given ten grams of the oxide of zinc twice or three times daily for several weeks together, and if we are to believe his report with methyl nuxcum... Other vegetable substances employed, powdered Valerian in doses of half a dram to 2 or 3 doses daily has been recommended. Combined with sulphate of zinc...
appears to have been of much benefit in some cases. To go on with the subject of Special Remedies would occupy too much space, and I therefore conclude by saying that little or no dependence can be placed in any course of treatment, but such as is comprised in the indications for regulating disorderly functions, increasing the tone and energy of the system, and carefully avoiding in most cases bleeding, which is at a rule useless. Contrariwise, they may be used in the true chronic cases with some slight relief. There is yet another remedy which must not be omitted, namely, the operation of trephining, as recommended by Dr. Marshall Hall, who believes that if performed in time it would entirely prevent the fit and even often cure the disease. But for my part I cannot see by what means the fact of cutting into the brain can cure confirmed Epilepsy, although in a more recent case and where there is great danger from the spasm and contraction of the muscles of the head, I slothful and consequently death of the patient from asphyxia it might be of service, but not
to such an extent as to cure the disease. But on the other hand there is the inconvenience
which this operation subjects the patient
namely of having an opening in the thorax.
These considerations should lead us to consider
with the evidence of Dr. Hall’s cases and I
cannot help coming to the conclusion that
very few epileptics require such treatment.

Henry St. John