
By

John Curtis Jones

From temperature extremity, no analyzer was sufficiently noticed.

Literature defective.
List of Authors Consulted

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Dr. Cheyne, Cyclostation of Practical Medicines.

Dr. Cooper, Observations on Experiments on Lying the Cephalic and Vertebral Arteries.

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form Convulsions from Haemorrhage.
Of the many Maladies which present themselves as a part of the inheritance of our afflicted race, Epilepsy is one of the most mysterious in its nature and melancholy and withering in its results.

Although a nervous disease, many of its most obvious and prominent phenomena have relation to the muscular system. It attacks by fits, the patient falls suddenly, loses consciousness, sensibility, and general tonic-clonic spasms supervene. Which after a time subside, leaving the patient languid, weak and torporous.

The disease becomes habitual or periodic and returns with a violence greater or less, and after an interval longer or shorter in proportion to the intensity of the cause, which have originated the attack and to the mobility and instability of the system of the patient.

The symptoms of Epilepsy may be divided into those—1. Before the Coming on of
the paroxysms, 2. during the paroxysms, 3. immediately after this occurrence; 4. in the interval between the paroxysms.

Sometimes there are no premonitory symptoms and then the attack comes on suddenly with fearful violence. Among the phenomena are headache, vertigo, mental excitation and depression, pitting, irritability, unsteadiness of gait, ringing in the ears and flashing of light before the eyes. Most often perception of odors, tastes and colors; an anomalous sensation, the aura epileptica, which usually begins in one of the extremities, rises up to the brain and is followed by convulsions.

The attack is usually announced by a loud unmeaning scream, attributed by Dr. Todd to some disturbance of sensation, some severe pain, which causes the patient to cry out, but which the sudden recollection of unconsciousness dissipates from his memory. The patient falls to the ground generally backward and his head is thrown to one side; the limbs and body
are rigir; the eyes open and fixed; the complex发展规划 a linea for the most part, though sometimes flushed. Convulsions now come on, with frightful distortions of the "human face anim." the eyes rolphone; the head is rotated, the hands clenched. The limbs are drawn up and thrown out, and the tongue is often protruded and caught between the teeth.

The patient often moans or utters dreams; the breathing is quick and loud; and a bloody froth often gathers upon the lips. Urine, feces, and plates are often discharged and in males there very often occur erections with ejaculation of semen. Gregory says in infants "erection glans penis."

The convulsions are sometimes very severe. The teeth and jaw are often broken, and I once saw a case in which there was frequent dislocation of the shoulder joint.

The duration of this horrible state...
varies from one minute to several hours—ten minutes being probably the average.

The third stage commences with an abatement of the convulsions, and the patient usually remains in a consciousness but sinks into an uneasy plumpness on awaking, the complains of headache and vertigo; his eyes are sunken and his tongue often lacerated; the muscles of the trunk and limbs are fatigued and stiff.

The patient seldom has any recollection of what was going on during the fit. During the interval, the patient sometimes appears to enjoy good health, but this is not generally the case. Loss of memory and instability of temper are among the most familiar effects of a paroxysm. The expression of countenance changes, becoming coarse or fatigued.

The paroxysms are seldom fatal but occasionally terminate in aphasia or palsy. The habitual repetition of the disease in general produces the most
denies any melancholy results; in reality, and insanity being re-called as among the most common. Many, however, escape and return, as did Napoleon, Caesar, Mahomet, Peter the Great, their mental powers unimpaired. The recurrence of the paroxysm is very uncertain. Sometimes the periodicity is well-marked. A very common time for the attack is during the transition from the waking to the sleeping state.

Baratius. Cullen divides the disease into three phases: 1. Epilepsia Centrallis. 2. Epilepsia Sympathetica. 3. Epilepsia Essentialis. Other writers make as many varietes as there are organs in the body; they specify the central, the gastric, the renal, the central &c., but the one, made by M. Esquirol, of Paris, who has made the subject one of special study and investigation, particularly in its connection with insanity, into centre and eccentric in the simplest and best
Pathology of Epilepsy difficult and obscure has afforded an ample field for ingenious hypotheses and theory. The old view was, that all the morbid phenomena were produced by arterial determination to the brain and that the force of the momentum, morbidly increased by whatever occasioned this determination, was the true cause of the whole train of consequences. Many of the familiar symptoms of the disease accord with this opinion. The flushing of the face, scamps of the eyes and throbbing of the cerebral arteries, often noticed, are of this kind. The effect of Compression of the Carotids and the occasional cure by ligature of the vessels seem also to favor this doctrine. Mr. Sally goes a step further in explanation and ascribes the determination to the head to "a sufficient contraction of the muscular of the vessels of the brain."
Instead of arterial determination, venous congestion which is uniformly found in Cases of Epilepsy, is supported by another body of Pathologists to be the source of the Convulsions. This notion forms the basis of Marshall Hall's ingenious theory of the disease and the practice he so zealously advocated as applicable to its cure. Hoüille states that, when of patients dying in a fit of this disease is always found congested and he considers congestion and suffocation to be the mode of death.

Dr. Marshall Hall beginning at the commencement offers a lucid rationale of the events in the order of their occurrence which may be stated as follows:

The earliest symptoms of a fit of Epilepsy are muscular spasms about the neck, drawing the head to one side, by which spasms a compression is excited upon the subjacent veins.
the internal jugular is compressed by
the sternomastoid and the vertebral
by the scaleni. The blood is thus ob-
structed in its return from the brain
large sinuses follows. The glottis be-
comes constricted—hence suffoca-
tion and convulsions of the trunk
and limbs. To prevent this suf-
ocation and its train of terrible Con-
sequences, the proposed tracheotomy
and this view is supported by cases in which
tracheotomy has cured or prevented.

The alleged facts are denial and the
reasonings of Hale impugned by
Prof. Romberg of Berlin and the late
Dr. Todd of London. The former says
that no proof is given that such com-
prison is really effected by-team of the
cervical muscles. Besides in syste-
cal paroxysms and the convulsive
thrice of Socrates there is no con-
sciousness while in the abortive forms
of epilepsy, the psychical disturbances,
prevail, scarcely any convulsive action is manifested.
Dr. Jodo objects that convulsions may be expected, for example by itschmia in dogs perfectly tracheotomised, with free ingress and egress of air... and in dogs whose muscles of the slates have been paralysed by section of the recurrent pneumogastric nerve.
He proceeds instead of Volk's arterial determination and excitement, and Marshall Hall's Morbus suffusion of suffocation and venous congestion a humoral theory of Eilepsy — in which it is assumed that it consists essentially in the generation of a Morbus Matter which infects the blood, which Morbus Matter has a special affinity for the brain or certain of its parts. The peculiar features of an Eileptic Disease are due to the gradual accumulation of this Matter in the blood until it reaches such an amount that it acts when the brain is in an explosive manner.
exciting a highly polarized state of the brain or its parts, which then discharge them through nervous power when certain other parts of the Cerbro-Spinal axes in such a way as to give rise to the phenomenon of the fit. The source of this motive matter is probably in the nervous system perhaps in the brain and may owe its origin to imperfect nutrition. This motive motive is conjectured to be urea, because in cases in which the kidneys are affected convulsions follow. Frisch, the Professor of Clinical Medicine in Berlin, considers it to be Carbonate of Ammonia, the result of the decomposition of urea in the blood. This humoral doctrine finds support in the frequent connection between Epileptic convulsions and retained speeia — in the correspondence between the Pergymal character of Epilepsy and other humoral diseases — in the influence of certain topic agents in producing Artificial Epilepsy — and in the
intervals—a period of suspension of con
summation and in the asserted fact
that a patient is in a better condition
of health after a fit than before, and
after a fully developed than an abortive
fit. Dr. Foad makes the cerebral hemi-
ospheres the primary seat of the disease
condition and considers that the
Corpora quadrigemina and Meso-
cephale are implicated consecutively.
This conclusion he bases on the
following arguments. In the first
place, he considers as fact in
Physiology better established, than
that the cerebral hemispheres are the
seats of intellectual operations and of
Consciousness and consequently
an affection of this part is capable
of inducing all the phenomena of
epilepsy as far as regards Cerebro-
ceans and Sensibility.
In the second place all the modern
appearances which present themselves
in old Epileptik Cases, effect Chiefly
the surface of the hemispheres or the investing membranes; and that these alterations must be looked upon as the accumulated effects produced by numerous paroxysms. In the third place, he attributes to the cerebral lobes a certain power of exciting motion, either direct or indirect, through their influence upon other portions of the brain and that consequently a disturbed action of the hemispheres may give rise to many of the phenomena of the epileptic paroxysm as regards the development of convulsions. He is led, however, from experiments upon the corpus quadrigemini and mesencephalo, by saline stimulation to regard Thomas also implicated and to be the chief organ in the production of the convulsive movements.
Professor Schroeder Van der Kolk, from his investigations into the structure of the Medulla Oblongata, considers it as differing from the Brain and Spinal Cord. In its halves being more closely united by transverse fibres and commissures and consequently a bilateral action is specially peculiar to it in being richer in sympathetic groups and crureally桑膝性 the special property of the healthy condition, numerous reflex phenomena in different definite groups of muscles, as the Brain and Spinal Cord, in action. Locium of these organs give rise to unilateral effects. But the Medulla Oblongata, from the peculiarity of its structure and action, gives rise to bilateral phenomena when it is the seat of morbid affection and irritations. Consequently he is induced to regard an expected sensibility of the Medulla
as the seat and source of epileptic phenomena. This upstretched sensibility is liable to discharge itself in convulsive movements, or the application of irritants, which may be seated in the brain itself, in the alimentary track, in the genital organs and in the parts supplied by the trigeminal or fifth pair of nerves.

In the commencement of the disease there is no textural lesion, but an upstretched capacity for reflex action, generated by some distant irritation. If this cause remain long, organic dilatation takes place in the vessels of the medulla oblongata and consequently an augmented supply of blood and a highly irritated condition of the ganglionic group are produced. Every attack then becomes a renewed cause of a subsequent one, as the vascular dilatation is promoted by the repeated congestions which originally commenced if
Exudation of albumen takes place from the constantly distended vessels, produc-
ing increased hardness of the met-
dulla, which may subsequently pass into fatty degeneration and softening and render the patient incurable. He thinks, also, that the experimental production of epilepsy, by Dr. Brown-Scott, is confirmatory of his views. After unilateral section of the Spinal Cord, a certain morbid condition is developed and an untold sensibility is gradually commu-
nicated to the Cord and finally to the Medulla Oblongata. As a con-
sequence of this augmented irritabil-
ity, the capacity for reflex action is greatly increased; and we begin-
ingly to give to convulsive fits, which at first require for their production a slight imitation but afterwards man-
ifest themselves spontaneously. In fact, the animal becomes epileptic.
Kussmann and Jenner, while locating the cause of the attacks, principally in the medulla oblongata, maintain that the whole brain participates more or less in the change.

Instead of an altered excitability, followed by active determination of blood and organic vascular dilatation, these investigators are led by their experiments to regard a state of anaemia produced by a pharmacologic contraction of the capillary vessels, as the proximate cause of epileptic convulsions.

Metamorphosis of tissue in the seat of the malady is disturbed by the suddenly withheld nutriment and the parts are brought into an excited state, giving rise to convulsions.

That an insufficient supply of blood to the brain may be the immediate occasion of convulsions, was long ago established by the experiments of Sir Astley Cooper and is confirmed by what is seen in the slaughtering of
animals and in the poisoning of living women. It is not the ordinary cause of the disease, however, as epilepsy often occurs when there is no indication of the anaemic state, and the convulsions even when produced suffer in their nature from those of true epilepsy as they do not return after recovery.

From the above brief resume, it will be seen that opinions not only different but directly opposed, find support among the best minds of our profession, concerning the pathology of epilepsy. Nothing, however, beyond a peculiar predisposition on the part of the nervous system to be impressed by agents, some internal to the organs to use in their intimate structure, has as yet been established concerning the nature of the disease.
Pathological Anatomy—Beyond mere venous congestion—the result of the mode of death—nothing constant or peculiar has hitherto been found. Effusions of liquor into the ventricles and on the surface; softening of the medullary portion of the brain; calcification of the membranes or its processes; alterations in the pineal and pituitary glands; the existence of some tumours projecting upwards, obstructions of veins and sinuses have all been recorded. Sulphate of lead has also been found in the substance of the brain—Hasse and more recently Kussmaul and Jenner. Sont the idea of ever finding an appreciable lesion of brain anatomically demonstrable acting as the cause of epilepsy. They affirm that it cannot be one of long standing, alteration of a tempo easy kind; and that it would be as
reasonably to use the words of Dr. Watson, "I detected the traces of a former voluntary movement."

Shriver and Hanlon, in the other hand, is lean, from his researches to believe that although at the commencement, there is no organic lesion, especially swollen from the repeated convulsions, a dilatation and thickening of vessels takes place and an albuminous fluid is ejected which at first causes more or less hardening and subsequently gives rise to fatty degeneration and softening causes.

Epilepsy is in all probability a hereditary disease; and Dr. Brown-Séquard thus made the important observation that the disease spontaneously occurs and is readily excited in those animals into the offspring of those animals, upon whom it was artificially produced. A strumous, hobnail and malformation of the head are also powerful predisposing causes.
The erupting causes are exceedingly various and very diverse in acting on the one hand upon the personal system directly and on the other hand through morbida impressions and changes wrought in other systems. The first class include all those lesions of the brain and its parts which have been named. Certain poisons seem also to act directly upon the brain as alcohol, lead, &c. Under this category fall all those cases resulting from passion emotion, expletment of public assemblies, sympathy or imitation. The second class affect chiefly the digestive and genital systems. The imitation of teething and of worms in the intestinal canal in children; the retention of fever poisons; the expulsion of eruptions; the contamination of the blood from retained sputa; and imitation in the course of a sneeze are among the most common
It is often associated with Amenorrhoea and Dysmenorrhoea in the female and in both sexes with venereal species when allowed by the marriage tie or unlawfully procured by promiscuous intercourse or worse than all by voluntary indulgence.

Prognosis is usually unfavorable as cures are very rare, although something may generally be effected in form of the patient by proper treatment. The frequency and violence of the fits may usually be diminished. The Secundine form is the more liable as the cause may often be removed.

Dead poisoning may be remedied; worms may be expelled; the intemperate and drunken may be reformed; and the imitation of dentition and Carious teeth will pass away or may be removed; doing and irregular intervals afford more opportunity for effort and are
as oppressive by expectation
The reverse and uniformable are
baff internal - Complicated with
loss of memory, paralysis &
Diagnosis refers only to the confusion
so readily made with Hyposemic
The femoral and the fact that it is
the disease above all others most
frequently simulated by soldiers
sailors and vagrants
Dr. Copland dwells on the air
invasion with a reminder: the in-
difference as to the mode and
place of falling; the degree of
anaesthesia; the distortion of the fea-
tures and the bruising of the
Complexion. In protruded cases
the Consistency and relevancy of the
replies given, will aid much
Treatment. Ignorant as we are of
any fixed organic Cause, productive
of the disease, it will be necessary
to inquire into the previous history
and the present condition of the
patient and curing done so be
guided in our treatment by the
circumstances of the case.
at one time the complaints of the pa-
tient shone reference to the brain
at another to the head; sometimes
to the digestive system and sometime
to the genital. In some cases the is
plethoric and in some he is thin
and emaciated.
During the interval, some manifest
extreme mobility and instability,
while others exhibit great apathy
and stupidity.
With these differences in the accom-
panying features, and functional dis-
orders of other organs besides the nervous
system, in epilepsy, it would not
accord with the principles of com-
mon sense, and the rules of the
practitioners to seek for a specific
treatment against all these multi-
form and variable disorders,
merely because the brain is affected
It is of the highest importance to distinguish the nature of the attack and to separate exacerbate from centre epilepsy. In the former case we may treat the patient by a rational method. Hopefully, in the latter, we shall be driven to a remedial course, in which empirical remedies, perhaps, predominate.

In cases dependent upon intestinal derangement, the purgative plan should be pursued. All of tannin, introduced by the elder Satham and commented by Dr. Water, might be selected. Anthelmintics and a mild, mercurial course may be instituted, if there be indications of hepatic disorder or of the presence of worms. The genital system is often the primary seat of disturbance. It is associated with uterine disorder in females and in both sexes with habits of self-abuse. A knowledge of these causes suggest the necessity of their removal.

In intractable epilepsy we must
endeavor to bring back the original irritation to its former seat.
The "aura" will demand attention of any local irritation which it must be removed. Expression of the nerve at the entrance that was involved, with success by Sir Astley Cooper & Duffield.
In the vast majority of cases no perceptible connection of a sympathetic character will be found to guide the treatment.
During the paroxysms, very little can be done. The patient should be prevented, from hurting himself, by gentle restraint. Forcing open the clenched hands and cramming salt into the patient's mouth, are delusions by done to abbreviate the paroxysm.
The management of the patient in the intervals constitutes vastly the most important portion of the treatment. Do loud placed great reliance on the treatment moral; and this idea of the humoral origin of the dis
ease lead him to attach considerable importance to general treatment—medical and hygiene. Thoeder van de Kolk, baring this treatment, upon his pathology, places greatest reliance upon conditions to the nervous system and eyternal derivatives—Hussmahl and Yenner, believing the proximate cause of the disease to lie, in a state of anaemia. I court the idea of bleeding, except for the relief of venous congestion—Romberg and Colin have, however, observed cases in which great relief has followed the abscission of blood—Of anaemia and a soft and flabby state of the muscles, with a corresponding condition of the heart, as indicated by auscultation, spirit, or course must be had to tonics, but photo of guinea where the paroxysms assume a periodical character.
and in other cases Chalybeate comb
bined with mild purgatives—
A brief mention of some of the most
prison remedies which are employed
in epilepsy, will conclude this essay
of these each practitioner has his
favorite and a preference among
them will be occasionally indicated
by the circumstances of the patient
and the circumstances of the case.

Native of silver has perhaps obtained
more suffrages in its favor than any
other medicine. It probably has no
advantages over other metallic tonics,
therefore should never be prescribed as
caused of the great danger of dissolving
the skin.

Sulphate of Copper has been recog
ounced by many practitioners
outside of Long has always mainta
ed a high reputation and is proba
bly the best metallic tonic
Digitalis, long known as a vulgar
remedy is largely endorsed by Sally
and is recommended by Prof. Scheer.

van der Nolte

Atropine is asserted, by Dr. Lange of Königsberg, to have cured in four
of ten cases; in the case of 1/100 it

persisted in for several weeks.

Chloroform and Calomel have

each been tried, but without any

very definite or encouraging results.