

AN
INAUGURAL DISSERTATION

ON

Epilepsy

SUBMITTED TO THE

PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY

OF THE

University of Nashville,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY

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OF

Ky.

1856

W. T. BERRY & CO.,
BOOKSELLERS AND STATIONERS,
NASHVILLE, TENN.

To The

Eminent Southern Physician,

Gentleman And Scholar,

W. A. Bowling, M.D.,

Epilepsy

Epilepsy is characterized by paroxysmal attacks of convulsions, with loss of sensibility and consciousness, without fever, and followed usually by coma.

Symptoms, Course, &c.

It will be most convenient to consider, first, the paroxysms; then, their relations towards each other, with the condition of the system in the interval; and lastly, the general course and termination of the disease.

1st. There are often premonitory symptoms sufficient to warn the patient of the approach of the paroxysm. The precursory phenomena differ greatly in duration and character. They may continue but for an instant, may last several minutes, or may extend to hours or days. They are generally very

2
brief. ^{my}The following are the symptoms
alluded to; - viz. - headache, drowsiness, vertigo,
flushing or paleness of the face, disordered sen-
sations or perceptions, such as dimness of sight,
or temporary blindness, optical illusions;
noises in the ears; the perception of un-
real odours and flavours; general un-
easiness; and feelings of pain, tingling,
or formication in the limbs, and other
parts of the body, Strabismus, an altered
state of the pupil, oscillatory move-
ments of the iris. sneezing, sighing
and hiccough. At times before the
loss of consciousness occurs a sensation
of a cold vapour is felt, hence cal-
led - aura epileptica, this appears to
rise in some part of the body, distant
from the brain, in a finger or toe for
example, or in the leg or arm; and

5
proceeds towards the head; and as soon as it has reached the brain the patient falls down.

Either after a longer or shorter duration of one or more of the above mentioned symptoms, or suddenly, without any premonition, the patient falls as if struck down by a blow; At the moment of falling the patient is seized with general convulsions, which often are so powerful as to require the strength of several persons to restrain them. The spasms usually alternate rapidly with relaxation; but some of the muscles, especially those of the Trunk, are apt to be affected with rigid or tonic contractions; and, though the limbs are thrown about with great violence, the body does not

more far from the place where it
fell. The head is twisted round; the
features are drawn to one side; the
eyes are turned up so as to show only
the whites, or roll from one side to
the other, or fixed with a rigid stare;
the jaws often grind together by an
oblique motion, and the tongue which
is thrust out of the mouth is sometimes
seriously injured. All the senses, for
the moment are paralyzed. Impressions
which in health are most powerful,
the brightest light, the loudest
sounds, the most fragrant odours and
flavours, the most painful wounds, are
quite unfelt. The pulse generally is
small frequent and irregular; while
the heart palpitates rapidly. After
an uncertain but generally brief

3
duration, the convulsive movements subside, the rigid spasm relaxes, the face becomes palled and shrunken, a profuse perspiration often breaks out, and, though the insensibility still continues, the body is composed, and nothing remains of the previous disturbance except some noise in respiration. At length consciousness gradually returns, and the patient, sitting up or rising upon his feet, looks about with an astonished, or stupefied air.

²⁴The duration of the paroxysm varies from a few moments to many hours. When it continues several hours, there is scarcely ever a steady perseverance of the convulsions; but these alternate with periods of quiet coma; as if the whole

consisted of distinct paroxysms, succeeding each other so rapidly that the second stage of the one has not fully ended, before the first stage of the following one begins. As many as twenty paroxysms may thus occur in the course of one day.

²⁷The symptoms which immediately follow the paroxysm are various sometimes after a short period of mental confusion the patient returns to his ordinary condition, very frequently he falls asleep, and after a time awakes in the possession of his faculties, and feeling well except that he often has a sense of fatigue, and is sometimes bruised or wounded in consequence of his falls. ²⁸Temporary insanity, in some cases follows the paroxysm, varying, from the slightest mental alienation to the most violent mania. There is and utter uncon-

7
sciousness of all that passes during the
paroxysm. The patient knowing that he
has had a fit by his bruises, soiled clothes,
his feelings of fatigue, of which frequent
experience has taught him the significance.
Epileptic attacks may occur at any period
of the twenty four hours. Not unfre-
quently they take place at night
during sleep.

20nd- The interval between the parox-
ysms is not less variable than their
degree of intensity. Sometimes after the
first attack another ~~one~~ does not fol-
low for months or years. In such cases
succeeding paroxysms are apt to occur at
gradually diminishing intervals. In other
instances the paroxysms are very frequent
in the beginning, and afterwards become
less so, settling down at last into a

more or less regular recurrence at longer
or shorter intervals. The period of recurrence
may be a year, six months, three months,
a month, a week, a day. Several parox-
ysms may occur in one day, or within two
or more days; and afterwards they may
not recur for weeks or months. Some pa-
tients have one fit upon each recur-
rence; others have two or more. In gen-
eral, though there may be a tendency
to a particular interval, yet the recur-
rence of the fit is liable to great un-
certainty. Often there is a total want
of regularity, and not the ~~least~~ least
calculation can be made as to the peri-
od of attack. In some few instances, a
regular periodicity is observed. This is
most apt to occur in females, and has
some connexion with the menses.

9
Though epileptic patients may have excellent health in the intervals of their attacks, and all their organic functions may go on with apparently perfect order, yet there is usually something in them different from other persons, some peculiarity which evinces that the cerebral functions are more or less deranged. They are often, for example, headstrong, obstinate, capricious; determined for the time being in what they will, but changing that will continually.

3rd The course of epilepsy is generally one of deterioration. The paroxysms are apt to return with greater frequency, and to assume a higher grade of intensity, if originally very mild. The brain appears to be gradually more and more deranged in its functions, in the intervals

of attacks. The memory and intellectual powers become enfeebled. Sometimes positive mania ensues. In rare instances, an increased intellectual impairment may be seen after each paroxysm. The altered cerebral condition exhibits itself also in various effects upon the exterior. There is a striking change in the features. They become enlarged, coarse, less intellectual, and more sensual. Beauty suffers greatly, in relation both to form and expression. The gait is shuffling, often somewhat one-sided. At last the patient sinks into complete imbecility.

This course may be accomplished in a few months, or years; but much more frequently occupies a great number of years; and epileptic patients may grow up from infancy to middle age, and

even to a somewhat advanced age. The progress towards imbecility is said to be more rapid in cases commencing before than in those commencing after puberty. Anatomical Characters.— But little is known in regard to the pathology of epilepsy, except that it is not connected essentially with any peculiar organic derangement of the brain. This organ has often been found to all appearance healthy, in epileptic persons who have died of other diseases.

When death has resulted from a recent paroxysm, the brain and its meninges appear greatly congested; the white substance being of a reddish colour, and the cineritious substance deep red, purple or violaceous. But no lesion is exhibited, implying the existence of disease anterior to the

conjugative movements, which is probably simultaneous with the paroxysm.

^uCauses—The causes which predispose to epilepsy are not very well understood. Inheritance is usually considered among the causes. The time of life has some influence over the tendency to the disease. It is more common in early than advanced life. It seldom occurs in old age, those individuals are attacked before than, after puberty. The nervous system is naturally very excitable in infancy, and easily thrown into disorder by disturbing causes. Many cases occur about the age of puberty; the changes which the system undergoes at that period are thought by some to predispose to the disease.

^vThe exciting causes are very numerous. A large proportion of the cases occurring in

73
early life have their origin in an attack of cerebro-meningitis. Injury of the brain from external violence sometimes causes the disease. This cause may operate in various ways, by a direct lesion of the brain, or the consequent inflammation, by the depression of the inner table of the skull, or of portions of its whole thickness.

Whatever strongly disturbs the cerebral functions may prove an exciting cause of epilepsy. Exposure to the direct heat of the sun, has sometimes brought on an attack. Terror is thought by some to have induced it more frequently than any other cause. The origin of the disease can often be traced directly to fright. Other diseases are frequent causes of this. Attacks of it sometimes follow the

retrocession of gout and rheumatism, the disappearance of a cutaneous eruption, the healing of old ulcers, and the suppression of some habitual discharge. Various febrile diseases give origin to convulsive attacks which take on the form of epilepsy.

Diagnosis—The only diseases with which epilepsy can be confounded are apoplexy, certain forms of hysteria, convulsions, arising from some temporary cause, as meningitis, fever, the puerperal state, dentition, and intestinal irritation in children.

There can be but little difficulty in distinguishing an ordinary epileptic fit, in its early stage, from apoplexy. The violent convulsions of the former, and the comparatively motionless state of the latter are sufficiently diagnostic. But when the epileptic paroxysm has

13
subsided into quiet coma, there is more difficulty. The paleness of the face, the comparative feebleness of the pulse, the foam at the mouth, the absence of snoring, and the want of paralytic symptoms, are generally sufficient to enable the practitioner to draw a correct conclusion.

The most prominent diagnostic symptoms, between epilepsy and hysteria, are on the part of the epileptic paroxysm. In the first place the total suspension of consciousness, which is so constant an accompaniment of the epileptic paroxysm, does not take place in the hysterical: in epilepsy there is no globus hystericus, no alternations of laughter and tears; the solitary cry which ushers in the epileptic attack so frequently, and which is so characteristic, is not heard in hysteria. The

10
heavy comatose sleep that succeeds epilepsy is not common in hysteria. Hysterical patients continue to avoid hurting themselves by their contortions: They do not bite their tongues nor foam at the mouth, the reverse is the case in epileptics.

Occasional convulsions cannot be recognised with certainty from the epileptic, except by the circumstances which attend them. Thus if the fit occur during the course of febrile disease in children, from the irritation of swollen gums, from intestinal irritation, from acute meningitis, or from the disturbance of the system attending the puerperal state, immediately anterior or subsequent to delivery, there may be good reason to hope that the tendency to convulsions may pass away with the tem-

porary cause; in which case, the affection would hardly be looked upon as epileptic. Should these convulsive fits be repeatedly experienced, at somewhat distant intervals, with a return to health, there would be ample reason to regard them as truly epileptic.

Prognosis—It is seldom that we can pronounce with any confidence a favourable prognosis; but there are some cases in which the prospect is much worse than in others.

If we have reason to believe that the disease is centric, and connected with any organic derangement of the nervous centers themselves, the prognosis must be bad. *Cæteris paribus* it is rendered worse by the coexistence of any sign of serofulous disease, it is rendered worse, also,

when the disease has happened in the parents or among the more immediate ancestors of the patient; whenever in short, there is reason to think the disposition to it is inherited. The prognosis is bad when the complaint occurs in persons who have slanting foreheads, and misshapen skulls. The longer the disorder has lasted, the less favourable is the prognosis.

On the other hand, the prognosis is better when the disease is eccentric: i. e., when there is any obvious exciting cause of the paroxysms, manifest in structural or functional disorder of some part of the body other than the nervous matter. And when this eccentric cause is removable—a stone in the bladder, for instance, worms in the intestines—then the prognosis still

further improves. On this account the prognosis is better in children than in older persons, for the exciting cause is often clearly eccentric, and likely to be transitory; the irritation of teething, for example.

^{an}Treatment The treatment of epilepsy resolves itself into the measures to be adopted during the paroxysm; and the measures to be adopted during the intervals.

In the paroxysm we have to provide against the risk of injury from the struggles and contortions of the patient; The patient should be placed on a bed, with his head a little elevated; all tight parts of the dress should be loosened, especially about the neck and trunk; the air should have free access to the patient; a piece of soft wood should be placed between the teeth to prevent

injury to the tongue; and the convulsive movements should be restrained so far as may be necessary to guard the patient from injury.

Should the congestion of the brain be so great as to threaten apoplexy, blood should be taken from the arm, cold applications to head.

When the pulse is rather feeble, and the convulsions persists, enemata of assa-fetida or oil of turpentine may be administered, In the protracted paroxysm, the happiest effects sometimes proceed from ipecacuanha given as an emetic. The external application, of garlic and brandy, to the spine may be useful.

Should danger from apnoea be apparent, ammoniacal liquids should be placed near the nostrils, sinapisms or hot

21
water should be applied to the extremities.

In the treatment of the interval, there are two prominent indications, first to remove all appreciable or possible sources of irritation to the brain, and secondly, to render that organ less sensitive to morbid impressions, or better able to resist them.

To meet the first indication, it is necessary to study well the state of the system, and, whenever any deviation from the healthy condition can be found to remedy it if possible. If the blood-vessels are too full, and the blood too rich, an occasional dose of the saline cathartics, should be administered, the patient should be confined to a diet exclusively vegetable, he should take moderate exercise.

Should the patient on the contrary, be

20
anemic, the chalybeates, simple bitters, sulphate of quinia, a nutritious diet, and passive exercise, are the remedies that should be given.

The second indication of treatment, during the interval, is to diminish the excitability of the brain, so as to render it less sensible to irritant impressions, or better able it to resist them. The remedies calculated to meet this indication are the narcotics, which diminish the sensibility of the brain, and the tonics and nervous stimulants which strengthen the nervous system, and tend to equalize its excitement.

Of the tonics those derived from the mineral kingdom are preferable. Nitrate of silver holds the highest rank among them. It should be given at first in

23
doses of one quarter of a grain, three or four times a day, to be gradually increased to one or two grains.

Next to the nitrate of silver, are the salts of copper. Either the sulphate or ammoniated copper may be used.

²⁴The preparations of zinc have been used with asserted benefit. The sulphate and ~~oxide~~ oxide are those ~~usually~~ usually employed. The oxide to be efficient, should be given in doses, from five to ten grains three times a day.

Of the vegetable tonics the sulphate of quinia is preferable. It is especially adapted to those cases which assume a regular periodical form.

Of the antispasmodics, or nervous stimulants, valerian has the greatest credit. *Asafoetida*, *mush*, and camphor have

been used with good results. Cimicifuga
has been resorted to by some.

Stramonium and belladonna are the
most efficacious among the narcotics.

Opium if used under any circumstan-
ces, should be used with caution.

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