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A STATISTICAL INQUIRY INTO THE NATURE AND TREATMENT OF EPILEPSY

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Содержание

A Statistical Inquiry Into the Nature and Treatment of Epilepsy

These three papers have already appeared in the Medical Journals, at different dates, during the past few years. They are now republished together, so as to form a connected inquiry. Since the production of the first and second of them, increased experience has greatly augmented the clinical material which might have been utilised in their investigation: but, as the essential facts have only thus been confirmed, and the general conclusions arrived at have remained the same, it has been thought best, with the exception of certain verbal alterations, to preserve the text of the articles as they originally appeared.

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I.
AN ENQUIRY INTO THE ETIOLOGY AND SYMPTOMATOLOGY OF EPILEPSY.[1]

The science of medicine is to be advanced by the careful collection of well-recorded facts, rather than by general statements or unsupported assertions. No inquiry thus conducted with scientific precision can fail to be without value, and to add a mite to that store of positive knowledge from which must emanate all hopes of progress for the healing art. Our acquaintance with the nature of epilepsy is as yet in its infancy, and although much valuable practical information has been put on record regarding this disease, it is believed that the following contribution may not be useless in either confirming or questioning previous conclusions.

The clinical aspects of epilepsy are especially difficult to investigate with exactitude. The physician, as a rule, is not himself a witness to the chief phenomena characteristic of the disease. He is therefore compelled, in most cases, to trust to the statements of the patient and his friends for their description, and even when the cross-examination is conducted with the greatest care, there are many points impossible to ascertain with certainty. In the following cases of epilepsy, which have been under my own care, those only are included in which loss of consciousness formed the chief feature of the attack; and in the succeeding particulars, attention will be specially directed to etiology and symptomatology.

ETIOLOGY

This may conveniently be discussed under (1) Predisposing causes, and (2) Exciting causes.

1. – Predisposing Causes

Sex and Sexual Conditions.– In one hundred unselected cases of epilepsy there were —

Males,	47 per cent.
Females,	53 per cent.

showing that practically the sexes were affected in equal proportions. Of the females there were —

Unmarried,	58.5 per cent.
Married,	41.5 per cent.

The greater number amongst the unmarried females is probably due to the list including children, and also to the fact that epilepsy is not an attraction to a man who purposes matrimony. Of the married females —

[1] Reprinted from the "British Medical Journal" of March 15 & 22, 1879.

The attacks were uninfluenced by marriage in	68.1 per cent.
The attacks were diminished after marriage in	27.2 per cent.
The attacks were increased after marriage in	4.5 per cent.

Thus, in the majority of cases, marriage seems to have no influence on the epileptic attacks of women, although in 27.2 per cent. the fits appear to have been diminished after that ceremony.

Of the married females there were —

Children in	82.3 per cent.
No children in	17.6 per cent.

Age.– In one hundred cases the age at which the first attack of epilepsy took place will be seen from the following tables: —

	Males.	Females.	Total
From 1 to 10 years	9	14	23
From 10 to 20 years	11	23	34
From 20 to 30 years	14	9	23
From 30 to 40 years	10	6	16
From 40 to 50 years	1	0	1
From 50 to 60 years	2	1	3

It will thus be seen that, in males, the most prevalent period for the first invasion of epilepsy is from the tenth to the thirtieth year; in females, from the first to the twentieth year. In both sexes the disease rarely commences after forty. The following table shows the ages of the patients under observation: —

	Males.	Females.	Total
From 1 to 10 years	4	1	5
From 0 to 20 years	10	20	30
From 20 to 30 years	17	15	32
From 30 to 40 years	11	9	20
From 40 to 50 years	2	6	8
From 50 to 60 years	3	2	5

This indicates that cases of epilepsy comparatively rarely come under observation after the age of forty. A large series of cases would however be required to determine any definite conclusions as to the mortality and longevity of the patients.

Occupation and Profession.– These do not appear to have any special relation to the production of epilepsy.

Hereditary Tendency.– In each of the cases under observation a very careful inquiry was made into the family history. This was confined to the parents, grand parents, uncles, aunts, brothers, sisters, and children of the patient. The following are the results: —

No family history of epilepsy, insanity, nervous or other hereditary disorders in 59 per cent.

One or more members of family affected with one or more of the above disorders in 41 per cent.

Of these last, in which there was a tainted hereditary history, one or more members of the family suffered from —

Epilepsy in	63.4 per cent.
Insanity in	12.1 per cent.
Phthisis in	12.1 per cent.
Asthma in	2.4 per cent.
Apoplexy in	2.4 per cent.
Hysteria in	2.4 per cent.
Hemiplegia in	2.4 per cent.
Spinal complaint in	2.4 per cent.

Concerning the above table, it is to be remarked that frequently the patient had several relatives suffering from different diseases; for example, one with epilepsy, a second with insanity, and so on. In such a case these have been classified under epilepsy, and, if this did not exist, under insanity, or other afflictions in the above order.

Of those cases in which epilepsy was present in the family of the patient, it existed in the following members: —

Father in	11.5 per cent.
Mother in	7.6 per cent.
Father, mother, and brother in	3.8 per cent.
Mother and child in	3.8 per cent.
Grandmother, mother, and two sisters in	3.8 per cent.
Mother and sister in	3.8 per cent.
Grandfather in	7.6 per cent.
Grandmother in	3.8 per cent.
Brother in	11.5 per cent.
Sister in	11.5 per cent.
Two brothers in	3.8 per cent.
Sister and child in	7.6 per cent.
Brother and uncle in	3.8 per cent.
Two uncles in	3.8 per cent.
Uncle in	3.8 per cent.
Aunt in	3.8 per cent.
Child in	3.8 per cent.

From these figures it will be seen that in no less than 41 per cent. of the total number of cases there was a distinct family history of hereditary disease. Of these no less than 87.5 per cent. were affections of the nervous system, and 12.1 per cent. of phthisis. Of the former 63.4 per cent. had relatives afflicted with epilepsy, and 12.1 per cent. with insanity. Epilepsy, according to these figures is eminently a hereditary disease, and it is possible even to a greater extent than is here represented; for the family history is often very difficult to arrive at, in the class of persons on whom most of these observations were made, who, either from ignorance or from prejudice, display a great want of knowledge concerning the health of their ancestors.

General health prior to the first attack.– As far as could be ascertained this was —

Unimpaired in	90 per cent.
Delicate in	10 per cent.

By the term delicate is understood any chronic derangement of health. The figures serve to indicate that, in the large majority of cases epilepsy has no necessary connection with the impaired general health of the patient.

Special illnesses prior to the first attack.– There were —

No antecedent diseases in	78 per cent.
Antecedent diseases in	32 per cent.

Of these persons who, prior to the first attack of epilepsy, had suffered from illnesses, the details are as follows: —

Convulsions at dentition in	43.7 per cent.
Rheumatic fever in	12.5 per cent.
Chorea in	6.2 per cent.
Mental derangement in	6.2 per cent.
Constant headache in	6.2 per cent.
Suppurating glands in	3.1 per cent.
Brain fever (?) in	3.1 per cent.
Small-pox in	3.1 per cent.
Typhus fever in	3.1 per cent.
Spinal curvature in	3.1 per cent.
Somnambulism in	3.1 per cent.
Scarlatina in	3.1 per cent.

The only special feature of this table is the fact that, of the cases of epilepsy under observation, convulsions at dentition were positively ascertained in 15 per cent. of the total number of cases, and in 43.7 per cent. of those having suffered from former illnesses. Here also the percentage is probably in reality greater, as it is obvious that many of the patients were ignorant as to whether or not these symptoms existed. There is no evidence that any of the other illnesses had any relation to the epilepsy.

Temperance and Intemperance.– On this head nothing definite could be ascertained. The patients either do not tell the truth, or have very elastic notions as to moderation in the use of alcoholic stimuli.

2. – Exciting Causes

To ascertain the exciting causes of epileptic seizures with exactitude is usually a matter of very great difficulty. It is simple enough when the results directly follow the cause; but this is not commonly the case. If, for example, a man, after a blow on the head (having been previously in good health) becomes suddenly seized with epileptic attacks within a few hours or days of the accident, we may fairly assume that the injury has originated or developed his illness. But should the seizure not supervene for some months or years afterwards, the external wound having in the meantime completely recovered, there remains on this question a considerable element of doubt. In the same way a patient often attributes the attacks to a fright which may have occurred weeks or months before they began; yet great care should be taken in accepting such a statement: on the other hand, it should not be utterly ignored. Again, if a person develops epilepsy after severe and prolonged domestic trouble or affliction, how are we accurately to determine the relation between the two? These difficulties render an exact method of ascertaining the exciting causes almost impossible, and this can only be approximated by a careful consideration of the entire history and circumstances of the case. Taking these into consideration, the following statements have been drawn up, in which only those conditions are recorded, where from a review of the whole case a reasonable relation was found to exist between cause and effect.

In a hundred unselected cases of epilepsy there were —

No apparent exciting cause in	43 per cent.
Possible exciting cause in	57 per cent.

Of the cases where a possible exciting cause was present, the following is an analysis: —

Blow or injury to head in	28.1 per cent.
Uterine disorder in	22.8 per cent.
Domestic trouble in	15.7 per cent.
Disease of the nervous system in	8.7 per cent.
Fright in	5.2 per cent.
Depression in	5.2 per cent.
Pregnancy in	5.2 per cent.
Mental strain in	3.5 per cent.
Sunstroke in	3.5 per cent.
Emotion in	1.7 per cent.

Thus, in no fewer than 16 per cent. of the total number of cases, and 28.1 of those in which a possible exciting cause was present, did epileptic seizures follow injuries to the head. Of the cases recorded under uterine disorders, it must be stated that these conditions were as much the accompaniments as the cause of epilepsy, the relations between the two being as follows: —

Attacks occurring at menstrual periods in	61.5 per cent.
Attacks associated with irregular menstruation in	30.7 per cent.
Attacks associated with uterine disease in	7.6 per cent.

An attempt was made in twenty-two cases to ascertain whether, in women, the age at which the epileptic attacks began had any relation to the period at which the catamenia commenced, with the following results: —

Average age at which attacks began	14.6 years
Average age at which catamenia began	14.6 years

This shows singularly enough exactly the same figures, and serves to point out, that in women, the earliest manifestation of puberty is a decided exciting cause for epileptic attacks. It must however be stated that, in the female epileptics, the attacks commenced before the age of puberty in 16.9 per cent. of their numbers. Of the 8.7 per cent. of cases included under the term "diseases of the nervous system," the epilepsy was associated with hemiplegia in all.

SYMPTOMATOLOGY

In a hundred unselected cases of epilepsy there were —

Epilepsia gravior in	62 per cent.
Epilepsia mitior in	10 per cent.
Epilepsia gravior and mitior in	28 per cent.

1. – Epilepsia Gravior

Premonitory Symptoms.– In the cases in which epilepsia gravior was present there were —

No premonitory symptoms in	34.4 per cent.
Premonitory symptoms in	65.5 per cent.

Of those cases in which there were symptoms premonitory to the attack, there were —

General premonitory symptoms in	47.4 per cent.
Special Auræ in	72.8 per cent.

By *general premonitory* symptoms are understood those morbid conditions lasting for some hours or days before each attack, and of the cases under consideration in which these were present, the following is an analysis: —

Prolonged vertigo in	46.4 per cent.
Headache in	21.4 per cent.
Nervousness in	14.2 per cent.
Drowsiness in	3.5 per cent.
Faintness in	3.5 per cent.
Depression of spirits in	3.5 per cent.
Cramps in	3.5 per cent.
Numbness of extremities in	3.5 per cent.

Of the cases in which a *special aura* preceded the attack, the details are as follows (the special symptom in each case being sudden): —

Loss of sight in	2.3 per cent.
Loss of speech in	13.9 per cent.
Loss of hearing in	2.3 per cent.
General tremor in	16.2 per cent.
Tremor of one foot in	2.3 per cent.
Sensation in epigastrium in	6.9 per cent.
Sensation in abdomen in	4.6 per cent.
Sensation in throat in	6.9 per cent.
Sensation in left side in	2.3 per cent.
Sensation in both hands in	2.3 per cent.
Sensation in one hand in	2.3 per cent.
Violent pain in head in	2.3 per cent.
Pain in one foot in	2.3 per cent.
Sparkling sensation in eyes in	6.9 per cent.
Pumping sensation in head in	4.6 per cent.
Noises in ears in	4.6 per cent.
Diplopia in	2.3 per cent.
Contraction of one leg in	2.3 per cent.
Rotation of head in	2.3 per cent.
Distortion of face in	2.3 per cent.
Twitching of thumb in	2.3 per cent.
Spasm of eye-balls in	2.3 per cent.
Disagreeable smell in	2.3 per cent.

From these figures we find that in 34.4 per cent. of the cases of epilepsia gravior there are no special symptoms announcing the seizure, which takes place without warning of any kind; and it is especially in such cases that patients in falling, seriously injure themselves. In 65.5 per cent. there are premonitory symptoms of some kind, which indicate often many hours before the approach of an attack. Of these last 47.4 per cent. are of a general character, and in no less than 72.8 per cent. is there a distinct special aura, which in 25.4 per cent. alone precede the attack, the remainder being associated with the general premonitory symptoms.

Symptoms of the Attack.– In the cases of epilepsia gravior there were complete loss of consciousness with convulsions, lasting from five to ten minutes, and occurring at intervals, leaving no question as to the true nature of the disease, and all doubtful examples have been excluded from this collection. Attempts were made to form an analysis of the different symptoms constituting the paroxysm, but with indifferent success, and these are not here reproduced, because they are not sufficiently accurate for scientific purposes. The patient himself can give no account of what takes place. The friends around do not look upon the phenomena of the attack with the critical and philosophic eye of the physician; hence any information from them as to the part convulsed, the colour of the skin, the duration of the seizure, and so on, is extremely vague and untrustworthy. The number of cases personally observed actually during attacks is too limited to warrant any generalizations. There is, however, one important point which can be accurately demonstrated – namely, whether or not the tongue is bitten, and in the cases under observation

The tongue was bitten in	68.8 per cent.
The tongue was not bitten in	31.2 per cent.

Frequency of Attacks.– Only a general average of the number of attacks can be made; and in the present series the following gives an idea of the frequency of seizures in different individuals.

Average of one or more attacks per day in	8.8 per cent.
Average of one or more attacks per week in	31.1 per cent.
Average of one or more attacks per month in	32.2 per cent.
Average of one or more attacks per year in	15.5 per cent.
At longer or more irregular intervals in	12.2 per cent.

This roughly indicates that, in the majority of cases, attacks of epilepsia gravior occur one or more times weekly or monthly. Under the last series, of attacks taking place at longer and more irregular intervals than a year, are included those cases where a few only have occurred during the lifetime of the patients.

Regularity of Attacks.– Many epileptics are attacked at regular intervals, sometimes on the same day or even hour; while others are afflicted at any time, day or night. The following indicate the proportion: —

Attacks occur at regular intervals in	21.1 per cent.
Attacks occur at irregular intervals in	78.8 per cent.

Time of Attack.– The following particulars alone could be definitely ascertained: —

Attacks only during sleep in	8.8 per cent.
Attacks only during day while awake in	8.8 per cent.
Attacks only during early morning in	15.5 per cent.
Attacks at no particular time in	55.4 per cent.

The chief feature of this observation is that in 15.5 per cent. of cases of E. Gravior the attacks always took place immediately after the patients had wakened in the morning, and this is probably due to the sudden alteration of the cerebral circulation from the sleeping to the wakeful state.

Symptoms immediately after the Attack.– The moment the attack is over sometimes the patient is in his usual condition, and feels no ill effects from the paroxysm. More commonly, however, he suffers from various symptoms, the chief of which, and their relative frequency, is as follows: —

Return to usual condition in	12.2 per cent.
Drowsy in	66.6 per cent.
Confused in	14.4 per cent.
Stupid in	13.3 per cent.
Irritable in	14.4 per cent.
Excitable in	3.3 per cent.
Vertigo in	13.3 per cent.
Headache in	41.1 per cent.

The above conditions may last from an hour to several days.

Present condition, or state between the Attacks.– It is impossible to enter minutely into the actual physical and mental health of all the epileptic cases under notice, but the following statement gives a sketch of some of the more important conditions associated with the disease, and the frequency with which they occur. In the inter-paroxysmal state the condition of the patients were —

Healthy in every respect in	17.7 per cent.
With some abnormal peculiarity in	82.2 per cent.
General health good in	75.5 per cent.
General health impaired in	24.4 per cent.
Robust in	66.6 per cent.
Not robust in	33.3 per cent.
Intelligence intact in	74.4 per cent.
Intelligence impaired in	25.5 per cent.
Loss of memory in	58.8 per cent.
No loss of memory in	41.1 per cent.
Stupid in	16.6 per cent.
Dull in	31.1 per cent.
Irritable in	25.4 per cent.
Frequent headaches in	41.1 per cent.
Frequent vertigo in	22.2 per cent.
Nervous in	21.1 per cent.
Special diseases in	21.1 per cent.

Of the 21.1 per cent. under the heading of special diseases, there were —

Hemiplegia in	6.6 per cent.
Paralysis of seventh nerve in	1.1 per cent.
Impediment of speech in	1.1 per cent.
Cicatrix over sciatic nerve in	1.1 per cent.
Idiot in	1.1 per cent.
Anæmia in	5.5 per cent.
Phthisis in	2.2 per cent.
Confirmed dyspepsia in	1.1 per cent.

From these details it is evident that epilepsy is not of necessity associated with impairment of the physical or mental health. On the contrary, we find that in 17.7 per cent. of the patients there was apparently no flaw of any kind in their constitutions, which were absolutely normal, with the exception of the periodic seizures. In no less than 75.5 per cent. was the general health good, and in 66.6 per cent. the patients were robust and vigorous. At the same time the health was markedly impaired in 24.4 per cent., and the sufferers were of delicate or weak habit in 33.3 per cent. The main fact, however, to be observed is that, in the majority of cases of epilepsy, the general health and vigour of the patient is not deteriorated. In the same way, the intellectual capacities are not of necessity affected. In 74.4 per cent. the intelligence is recorded as not seriously impaired; and in 41.1 per cent. the memory as good. On the other hand, the mental faculties were markedly deficient in 25.5 per cent.; the patients were dull and slow in 31.1 per cent.; and in more than half, or 58.8 per cent., was there evidence of loss of memory. Another frequent symptom is repeated and constant headache, which, in the present series of cases, existed in 41.1 per cent.

2. – Epilepsia Mitior

This occurred altogether in 38 per cent. of the total number of cases. In these it occurred —

By itself in	26.3 per cent.
Associated with E. Gravior in	73.6 per cent.

In all, the usual characteristics of the *petit mal* presented themselves; there being temporary loss of consciousness, sometimes with slight spasms, but without true convulsion, biting of the tongue, &c.

Frequency of Attacks.– The rough average frequency of attacks, as estimated in the cases under consideration, was as follows: —

20 to 30 attacks per day in	3.7 per cent.
10 to 20 attacks per day in	7.4 per cent.
5 to 10 attacks per day in	14.8 per cent.
1 to 5 attacks per day in	40.7 per cent.
1 or more attacks per week in	22.2 per cent.
1 or more attacks per month in	7.4 per cent.
At rarer intervals in	3.7 per cent.

Thus when epilepsia mitior exists, in the majority of cases the attacks are of daily occurrence.

Loss of consciousness, as ascertained in a series of cases, was

Complete in	48.3 per cent.
Partial in	51.6 per cent.

Premonitory Symptoms.– These are not, as a rule, so well marked in epilepsia mitior as in E. Gravior; but frequently the aura is quite as distinctly appreciated. In the 28 per cent. of cases in which E. Mitior is associated with E. Gravior, the aura was apparently the same in both. Of the 10 per cent. cases of E. Mitior occurring by itself, the following is the record: —

No aura in	20 per cent.
Sensation in epigastrium in	20 per cent.
Loss of speech in	10 per cent.
Violent pain in head in	10 per cent.
Tingling of extremities in	10 per cent.
Choking sensation in	10 per cent.
Hallucination in	10 per cent.
Vertigo in	10 per cent.

The number of cases in E. Mitior is too limited to warrant further generalization.

II.
AN INQUIRY INTO THE ACTION OF THE BROMIDES ON EPILEPTIC ATTACKS.[2]

Bromide of potassium is generally recognised as the most effective anti-epileptic remedy we at present possess. There exists, however, great difference of opinion as to its method of administration and to the amount of benefit which we may expect from its use. Some physicians who employ the drug after one method come to totally different conclusions as to its efficacy from those who use another. Many believe the remedy to be only useful in certain forms of the disease, and to be very uncertain and imperfect in its action. Others, again, maintain that it is positively injurious to the general health of the patient. These and other unsettled points the following inquiry attempts to make clear.

[2] Reprinted from the "Edinburgh Medical Journal" for February and March, 1881.

Конец ознакомительного фрагмента.