ANALYSIS

OF

FIFTY-TWO CASES OF EPILEPSY

OBSERVED BY THE AUTHOR.

BY

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THE 52 cases of epilepsy upon which the following analysis is based have occurred exclusively under my own observation, and the conclusions to which I desire to draw the attention of the Society will only bear upon points with reference to which satisfactory evidence could be obtained.

Sex.

Twenty-four were females, or 46·15 per cent.

Twenty-eight were males, or 53·84 per cent.

This observation is in accordance with the generally received opinion among British physicians that the disease more frequently affects the male than the female sex, though it does not establish a preponderance on the side of the former of more than 7·69 per cent.

NOTE.—A detailed account of the symptoms, progress, and treatment of the fifty-two cases on which the foregoing analysis is based were presented to the Society, for verification of the statements contained in it, at the time when the paper was read.—*Ed. Sec.*

Age.

The following table exhibits the distribution of the cases throughout the different periods of life; the basis for the calculation is not the age of the patient when under treatment, but the age at which the epileptic paroxysm first occurred:

Period of first occurrence.	Number of cases.		
0— 5 years	12 } 17	36, or 69·23 per cent.	From infancy to the age of 20 years inclusive.
6—10 „	5 }		
11—15 „	11 } 19		
16—20 „	8 }		
21—25 „	3 } 4	8, or 15·38 per cent.	From 21 to 40 years inclusive.
26—30 „	1 }		
31—35 „	4 } 4		
36—40 „	0 }		
41—45 „	3 } 7	8, or 15·38 per cent.	From 41 to 55 years inclusive.
46—50 „	4 }		
51—55 „	1 1		

Arranged according to sex, we find that during the first decennium of life there were 8 males and 9 females; during the second, 12 males and 7 females; during the third, 2 males and 2 females; during the fourth, the same numbers of each; during the fifth, 2 males and 3 females; and during the sixth one female.

Period.	MALES.		FEMALES.	
	Absolute number.	Per centage.	Absolute number.	Per centage.
0 to 10 years	8	28·57	9	37·5
11 „ 20 „	12	42·85	7	29·16
21 „ 30 „	2	7·14	2	8·33
31 „ 40 „	2	7·14	2	8·33
41 „ 50 „	4	14·28	3	12·5
51 „ 60 „			1	4·16
Total	28	...	24	...

This table demonstrates that the tendency to the disease is, as was already shown by Tissot and Esquirol, nearly equal in the

two sexes during the first ten years of life; that the male sex, during puberty, exhibits a more marked proclivity to epilepsy than the female; and that in the later periods of life, again, the ratio observed during childhood appears to prevail; though, as in this case, with a balance on the side of the female. The above numbers would not in themselves suffice to establish a law; but taken in conjunction with the results obtained by other observers they appear to deserve attention.

Causes.

An hereditary taint could be traced only in 6 cases (Nos. 13, 14, 18, 22, 37, 53), or in 11·1 per cent. A definite cause was assigned by the patient or the patient's friends in 16 cases, or nearly one third of the whole. Among these, otorrhœa is mentioned twice; fright twice; injury to the head twice. On a perusal of the "causes" it will be apparent that they differ in the relation which they could have respectively borne to the occurrence of the seizure.

The following are the numbers of the cases and the respective causes assigned:

No. 5. Otorrhœa.
„ 10. Fright.
„ 11. Mental exertion.
„ 22. Scarlet fever.
„ 24*a*. Cutting teeth.
„ 25. Swallowing the core of an apple.
„ 27. Operation for strabismus.
„ 29. Otorrhœa.
No. 31. Derangement of stomach.
„ 32. Blow on head.
„ 34. Pregnancy.
„ 35. Anxiety.
„ 37. Approach of catamenia.
„ 41. Fright.
„ 43. Fall on head.
„ 44. Fever.

Premonitory symptoms.

The occurrence of an aura is a point upon which authors have expressed different opinions. I find that an aura, under which term I comprise all premonitory symptoms

indicating the occurrence of a seizure, is noted in 27 out of 52 cases, or rather more than one half.[1] The most frequent indication of an approaching fit is a sense of giddiness and impairment of vision; sometimes the patients suffer pain in a definite region of the body, or they are unable to define the sensation, but are aware that some change is going on from which they know that the paroxysm is about to take place. It will be observed that the premonitory symptom is never described by the patient as a puff of wind, or an "aura" in its verbal sense.

CASE 2. Sense of choking and dimness.
„ 3. A sensation extending from the thumb up the arm, with spasm of the latter.
„ 4. Headache.
„ 6. A sensation ascending from the stomach.
„ 7. A sensation passing from the hand to the head.
„ 8. Dimness and pain in the right arm. (These premonitory symptoms did not occur at the time the patient was under treatment, but had prevailed at an earlier period.)
„ 9. Pain across the shoulders.
„ 10. Loss of sight.
„ 11. Vertigo and general stiffness.
„ 12. Feeling of illness for half an hour before fits.
„ 13. Head goes round.
„ 17. Sense of suffocation and tremors.
„ 18. A momentary warning.
„ 21. Dimness.
„ 22. Short cough.
„ 24*a*. Sickness.
„ 26. Lightness of head followed by oppression. (In this case the premonitory symptoms were generally absent.)

[1] Romberg (Syd. Soc. Ed., translated by E. H. Sieveking, M.D., vol. ii, p. 197) observes that he found an aura to occur in about one half of his epileptic patients.

CASE 28. Sense of strangeness.
" 31. Pain at stomach and sickness.
" 33. Drowsiness.
" 34. Loss of power in left hand for twenty minutes before fits.
" 36. Rigors.
" 40. Pain in hypogastrium.
" 41. Shaking and curious sensation in hand.
" 43. Lightness in head.
" 46. Sense of heavy weight.
" 53. Sometimes fits preceded by a cry.

It follows that the presence or absence of a premonitory symptom is not essential to the diagnosis of epilepsy.

Individual symptoms.

Headache.—Headache is a very frequent concomitant of epilepsy. It was observed in 33 out of 52 cases, or 63·42 per cent. The mode in which it occurs varies considerably. The patient either suffers habitually or very frequently from it, and the symptom bears no immediate relation to the paroxysm; or the headache occurs shortly before the paroxysms so as to usher them in; or again, it affects the individual only after the fit is over.

The headache was constant or frequent in 19 cases, or 36·5 per cent.

It occurred before the fits only, in 4 cases, or 7·7 per cent.

It occurred after the fits only, in 10 cases, or 17·3 per cent.

Biting the tongue.—Biting the tongue is regarded, and justly, as an important corroborative symptom of epilepsy, and is so far valuable in point of diagnosis. It is, however, by no means uniformly present, nor does it constantly occur in the paroxysms affecting the same individual. Many attacks may take place before the tongue is bitten, so that, if we base our diagnosis upon this symptom as pathognomonic, we shall often be at fault.

The tongue was found to be bitten in 17 cases, or in 32·7 per cent.

Urine.—I have met with no appearance or constituent of the urine which bears any uniform ratio to the disease in question.

In 19 cases (Nos. 13, 14, 18, 19, 21, 22, 23, 24*a*, 25, 28, 35, 36, 37, 40, 42, 43, 44, 50, 51) in which the urine was tested for albumen, it was found temporarily present in one (37), permanently in one (23).

The urine was examined for sugar in 14 cases (Nos. 18, 19, 21, 25, 28, 35, 36, 37, 40, 42, 43, 44, 50, 51), and it was not found once;[1] a result which appears irreconcilable with the observations of Dr. Goolden, that sugar is commonly found in the urine of epileptic patients.

Results of Treatment.

Without entering into the very complicated question of the mode of treatment advisable in different cases and under different circumstances, I would express a feeling of scepticism with regard to the positive certainty of any cure of epilepsy. In the majority of cases I believe that no organic lesion, in the ordinary anatomical sense of the word, was present at the commencement of the disease, and in a large number of cases no organic lesion appears to result from the long-continued recurrence of the epileptic paroxysm. It appears that the presence of a diathesis is essential to the occurrence of the disease; and that it may be suppressed or held in check: whether it may be eradicated is a question which I would not venture to answer in the affirmative. I am satisfied of the power of well-selected remedies in repressing and often indefinitely postponing the paroxysms. I would particularly insist upon the extreme importance of dietetic and regiminal treatment; still the frequency with which, after long intervals of rest, this demoniac affection is found to present itself again, in the same individual, must be a warning to every physician not

[1] The tests employed were Trommer's, Moore's, Barreswill's, and Kletzinsky's.

to reckon with too much confidence upon the permanent success of his treatment.

The number of (apparent) cures was 15, or 28·85 per cent. Among these I have included those only in whom the fits had ceased to appear for a considerable period after treatment was adopted. More or less benefit was obtained in other instances; but to these I do not more particularly advert.

The cases reported as cured are Nos. 4, 5, 6, 7, 8, 9, 14, 18, 19, 22, 28, 29, 31, 36, 44. Of these one, No. 18, returned to me after a free interval of a year, when the fits again showed themselves, and were again arrested by the same mode of treatment.

The duration of the disease previous to the individual's coming under treatment is a point of interest; the curability manifestly bearing an inverse ratio to the duration.

Case 4. Three to four weeks.	Case 19. Two years.
„ 5. Six years.	„ 22. First fit.
„ 6. Two years.	„ 28. Two years.
„ 7. Three weeks.	„ 29. Four months.
„ 8. Eight years.	„ 31. Nine months.
„ 9. Two years.	„ 36. Three years.
„ 14. Ten days.	„ 44. Recent.[1]
„ 18. One year.	

Including the last case, 8 of the 15 (apparent) cures were wrought in cases that had lasted one year and under (viz., 4, 7, 14, 18, 22, 29, 31, 44); 4 were of two years' duration, 1 of three, 1 of six, and 1 of eight years.

To go into the details of treatment would involve the necessity of an argument on the pathology of the disease, longer than the members of the Society would be disposed to receive. I will only venture to say a few words on the subject. If we regard epilepsy as the symptom of a deep-seated constitutional affection our treatment must neces-

[1] In this case there had been an epileptic paroxysm seventeen years previously.

sarily vary with the nature of the latter, unless it can be shown to present an unvarying character. In some peculiarly fortunate cases we may succeed in discovering and removing the exciting cause of the paroxysm, and may thus prevent the recurrence of the seizure; but, in the majority of instances, this is not feasible, and we are called upon to deal with the affection as it exists, without reference to antecedents.

The following is an enumeration of the main remedies which were employed in the most successful cases, which will at the same time serve to indicate the line of practice which I commonly adopt. In the enumeration the dietetic and regiminal measures are not included, but I would again urge their extreme importance.

CASE 4. Blister; purges.
„ 5. Seton; purges.
„ 6. Tartrate of antimony ointment to neck; seton; steel.
„ 7. Counter-irritation at nape; cotyledon umbilicus.
„ 8. Cupping at nape; diuretics; zinc.
„ 9. Purges; tonics.
„ 14. Blister; Ferri et Quinæ Citras.
„ 18. Sulphas Zinci, ad gr. x.
„ 19. Calomel; Digitalis; Tr. Ferri Muriat.
„ 22. Morphia.
„ 28. Sulphas Zinci, ad gr. xxxvi (triginta sex).
„ 29. Ol. Jecoris.
„ 31. Vinum Ferri.
„ 36. Purges; blisters; strychnia.
„ 44. Quina; steel; Nitras Argenti.

From this enumeration I would merely draw this inference, that the main indications which should guide us in the treatment of epilepsy are—to remove local congestion by counter-irritants, to promote the healthy action of the secernent organs, and to give tone to the constitution by vegetable and metallic roborants. I would express my belief that we possess no specific for epilepsy; the salts of

zinc, which have of late been very prominently put forward, frequently fail.

In conclusion, I would beg to offer my apologies to the Society for presenting these desultory observations. The composition of an elaborate essay on the subject of epilepsy would have been a question of time only; but, from the days of Hippocrates, who energetically combated the popular superstitions of his day bearing upon the νόσος ἱερὸς, to our own times, so much that is vague and indefinite has been said and written on the subject, that I have been particularly anxious not to make a further addition to the *rudis indigestaque moles* of mere hypothesis already existing in this department of medical science.

POSTSCRIPT; *20th July*, 1857.

The chief writers who have occupied themselves with epilepsy differ upon the question as to whether it prevails more in the male or in the female sex. Foville, Frank, Tissot, Esquirol, and Moreau may be mentioned among those who state that the greater proclivity is on the side of females; Drs. Elliotson, Watson, Romberg, and Boyd may be mentioned among those who hold that males are more frequently attacked than females. My own experience tallies with the latter. I do not propose to enter into an inquiry as to how far the epileptic cases in the Salpetrière and Bicètre respectively represent the average frequency of epilepsy in France, though it is a fair question whether they do so; there can, however, be no objection to the validity of a return with which (since writing the preceding paper) I have been favoured by Dr. Farr, of the Registrar-General's Office, an Honorary Fellow of the Medical and Chirurgical Society. As this return embraces the deaths from epilepsy throughout England and Wales for seven years, and therefore represents a larger field than, as far as I know, has

ever yet been explored for this particular purpose, I think that it is not without interest, especially as it may be regarded as conclusive evidence of epilepsy affecting the male sex chiefly, at least in England and Wales.

DEATHS AT EACH AGE AND IN EACH SEX FROM EPILEPSY THROUGHOUT ENGLAND AND WALES FOR THE SEVEN YEARS 1848—1854.

	Total.	Under one year.	1	2	3	4	Under five years.	5	10	15	25	35	45	55	65	75	85	95 & upwards	Not specified.
Males	6,729	231	118	91	64	59	563	256	361	996	1063	1039	876	679	559	291	37	2	7
Females	6,147	162	90	65	54	58	429	214	329	1174	1054	854	650	600	531	267	42	1	2
Persons	12,876	393	208	156	118	117	992	470	690	2170	2117	1893	1526	1279	1090	558	79	3	9

From this paper, then, it appears that the proportion of deaths from epilepsy are—

Males . . . 6729.
Females . . . 6149.

or, Males . . . 52·26 per cent.
Females . . . 47·73 „

The average male mortality from epilepsy in England and Wales is 961·3; that of females 878·1, annually, yielding a difference of 83·2, which goes to the male account.

The table does not necessarily prove that the ratio of seizures is the same in both sexes, but it offers very strong evidence to that effect.