

Collins (J. D.)

AN ANALYSIS
OF
ONE HUNDRED AND TWENTY-FIVE CASES
OF CHOREA.

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OF NEW YORK.

Instructor of Diseases of the Mind and Nervous System in New York Post-Graduate Medical School; Neurologist to the Demilt Dispensary,
and Visiting Physician to the Hospital for Nervous
Diseases, Blackwell's Island.

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The following remarks are based on an analysis of 125 cases of chorea that have presented themselves for treatment in the clinic of Prof. Charles L. Dana, at the New York Post-Graduate School during the last four years.

It is not my intention to do more than present a mere analysis of the cases as bearing on the etiology and inter-relationship to other diseases; reserving for a future time farther elaboration, and the detailing of some of the histories, particularly those illustrative of chronic and congenital chorea.

In presenting the following table bearing on the etiology of chorea, I shall contrast it with the report of 130 cases from this same clinic, published by Dr. Dana in the Archives of Pediatrics, March and April, 1888. In this way inferences may be drawn from a total of 255 cases which have been treated in this clinic during the past ten years.

CASES FROM 1888 to 1893. 125.

<i>Age.</i>	Average age,	12.4
	Maximum age,	28
	Minimum age,	4
	Period of greatest frequency, 5 to 10 years,	
	From 5 to 10 years of age, total number,	53
	From 11 to 15 years of age, total number,	45
	From 16 to 20 years of age, total number,	10
	From 21 to 28 years of age, total number,	8
<i>Sex.</i>	Male,	41
	Female,	84
<i>Seasons.</i>	March, April, May, in 86 cases,	33
	September, October, November, in 86 cases,	28
	December, January, February, in 86 cases,	12
	June, July, August, in 86 cases,	13

Relapses.
 More than one attack, 25
 Relapses oftenest in the Spring, next in the Summer.

Recurrence.
 13 had 2 attacks.
 4 had 3 attacks.
 5 had 4 attacks.
 2 had 5 attacks.
 1 had 8 attacks.

CASES FROM 1883 to 1888,
 130.

Age.
 Average age, 12.8
 Maximum age, 35
 Minimum age, 5
 Period of greatest frequency, 5 to 15 years,
 From 5 to 10 years of age, total number, 51
 From 11 to 15 years of age, total number, 55
 From 16 to 20 years of age, total number, 13
 From 21 to 30 years of age, total number, 6
 From 31 to 35 years of age, total number, 1

Sex.
 Male, 35
 Female, 83

Seasons.
 March, April, May, in 120 cases, 41
 September, October, November, in 120 cases, 30
 December, January, February, in 120 cases, 27
 June, July, August, in 120 cases, 22

Relapses.
 More than one attack, 30
 Relapses occurred oftenest in the Spring, next in the Autumn.

Recurrence.
 18 had 2 attacks.
 6 had 3 attacks.
 3 had 4 attacks.
 2 had 5 attacks.
 1 had 7 attacks.

Neuropathic evidence in family.

In eight per cent of the cases either a brother or sister of the patient had had chorea. In two of the cases one of the parents was insane.

In four of the cases the mother was hysterical.

In three of the cases the parents were both "very nervous."

In eleven of the cases there was a pronounced history of inebriety in one of the parents.

Association with rheumatism and heart disease.

In seven per cent of the cases one of the parents gave a clear history of rheumatism or rheumatic manifestations. In Dr. Dana's report the proportion was about nine per cent.

A total of eight cases of the 125 gave a history of rheumatism and in three of these the patient had had more than one attack. Of these three, two had a mitral regurgitation. Of the first 130 cases, in seven only was there a distinct rheumatic history. Besides these a mitral regurgitant murmur was discovered in

seven other cases. In eleven cases functional hæmic murmurs were heard particularly after treatment had been established. In one case a double mitral with dilated heart was present.

Exciting causes.

(1) Fright, eighteen cases.

(2) Preparing for school examinations, studying hard or worrying about studies, eight cases.

(3) In five cases the patient had recently had fever resembling malarial fever.

(4) In three cases a fall or an injury was soon followed by the choreic manifestations. In one of these the nurse let a baby fall from her arms and the twitchings were noticed a few days afterward. It is scarcely possible to say how closely we can trace a relationship between such injuries and the appearance of chorea.

In one case it was the chorea of pregnancy, and this case relapsed twice at each succeeding pregnancy.

In two cases the children were idiotic.

In two cases the patients were suffering from phthisis.

In one case the direct exciting cause seemed to be syphilis or the worry about having recently contracted syphilis.

In five of the cases the patients were treated for intestinal worms.

Side first affected.

In forty-one cases the right side was first affected, in twenty-eight the left. The average duration of the disease after treatment was begun was a little more than seven weeks. The average time which had elapsed before the patient was brought under our care was thirteen days. This is exclusive of cases which can rightfully be called chronic chorea. Of the 125 cases, there were three cases of chronic chorea and two cases of chronic chorea minor, classifying them according to Osler. That is, the chronic chorea minor cases are those which pursue a chronic course and ultimately recover. During the disease there is complete retention of the mental powers. While the chronic chorea cases are those that occur without hereditary disposition, and may set in at maturity, adolescence or old age attended with times of amelioration and times of exacerbations. The details of these cases will not here be entered into.

In one case respirations were peculiarly affected, jerky and irregular in character. It is not entirely impossible that this was due to involvement of the diaphragm.

Eight of the patients who suffered from chorea between five

and ten years of age had at various times attacks of pavor nocturnus and in two of these, these attacks of night terror were much more alarming to the parents than the chorea itself. In one case of chorea occurring in an adult, distressing and alarming dreams were very troublesome. In four of the cases the choreic movements persisted during sleep. In seven cases the choreic movements were so severe as to precipitate the patient from the bed. In a very large proportion of the cases sleep, however, was without disturbance, particularly when the patient was not anæmic. In one case the twitchings affected mostly the eyes, and at times when the movements were very severe, she would be taken with most intense cramps in the stomach.

The speech was affected in a small per cent of the cases, although the records on this point are not always explicit. Enuresis was very troublesome in three cases, particularly so in a young Miss of fifteen who had suffered three attacks, each of a very aggravated type. When free from chorea the enuresis was absent.

Treatment.

It will not be amiss to say a few words here concerning the treatment that has been employed. In a large proportion of the cases most reliance was placed upon arsenic and iron; within the past two years we have given exalgine with quite gratifying results to twenty cases. Although the effects of its use were always manifest, in four of these cases its use had to be discarded on account of the too depressing effects that followed its administration. In three cases arsenic had already been tried before the use of exalgine was begun, the substitution of the exalgine for the arsenic was quickly followed by beneficial manifestations. In two cases, however, this was just reversed, the use of exalgine was not beneficial and bettering followed the use of Fowler's solution. It should be stated in this connection that these cases were of some duration before coming under our observation, and it is my opinion that exalgine is not of so much benefit in cases of chorea where the choreic manifestations have continued for any considerable length of time. Its use not only lessens the force and severity of the twitchings but abbreviates the duration of the disease. This is very well shown by the following case: L. W., aged seven years and six months, was brought to the Post-Graduate clinic on August 22d, 1892, suffering from an extremely severe attack of chorea; the movements were general,

more severe, however, on the right side, speech was affected, she did not remain quiet for a second and the movements were so severe as to throw her out of bed or the baby carriage if she was not strapped in. This has continued for nearly two weeks. No rheumatism, no cardiac complications, but a hæmic murmur could be heard over the carotids. She was given exalgine, two grains three times a day, increasing one dose each succeeding day. In three days she was brought back to the clinic, the choreic movements greatly ameliorated; but apparently to look at her she was bordering on a state of collapse, the extremities were very cold, the pulse extremely feeble, the skin of a bluish white appearance, and she complained of being extremely tired. Large doses of iron were afterwards administered with a continuation of the exalgine, and by September 27th the patient was nearly well. She twitched only occasionally and particularly when joyous, angry or excited. October 11th, an entry in the case book says, "patient energetic and lively, wants to run and play and is free from twitching." In this case, as will be seen, the recovery came in about six weeks under the influence of the exalgine. That is, it is not too much to say that the recovery was hastened, for it is scarcely possible to believe that with the choreic manifestations so severe as they were in this case that the little patient would recover without medication in so short a time. This case shows also the intense depressing effect that accompanies the use of exalgine. To one unaccustomed to its use and effects it is quite likely that the evidences of intense anæmia that quickly ensue would cause a considerable alarm. This with the attending depression can be combatted by the free use of iron, and we have never seen any bad or disastrous results follow its administration in the clinic.

Arsenic in the shape of Fowler's solution was made use of in the larger proportion of the cases with the same results as have been stated before. There is no question but what it is an extremely valuable drug in the treatment of chorea. In one case where the twitchings were quite severe, Fowler's solution was ordered in three drop doses, by a mistake of the druggist it was marked thirty drops. This last dose was given for a day and then ensuing vomiting caused the mother to stop its administration, until the child was brought again. When she was, there was a very great improvement in the symptoms.

The zinc salts, particularly the bromide, has been of considerable use in the clinic and is a common prescription, particu-

larly where the disease has been present for some time before coming under observation. In cases where the movements are very severe, partial or complete rest, that is as nearly complete as possible, is the most important adjuvant.

A word in reference to the use of iron in the treatment of chorea may not be amiss. I have already called attention to the necessity of its use during the administration of exalgine. A very considerable number of cases of chorea are predisposed to anæmia and during the course of chorea, anæmia rarely fails to develop. Iron, primarily to combat this anæmia and sustain the strength, is very valuable; secondly, Sydenham's chorea is without much question an infectious disease, and as in many others infectious diseases, iron in some shape is necessary.
