Critical Digest.

CHOREA IN THE ADULT, AND IN THE OLD.

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CHOREA is not a common disease in persons after thirty years of age, and the records of it are scanty ; but the term is used of so many different classes of illness, that it is worth while to arrange and classify the cases at present recorded.

In the first place, elderly or old people are occasionally, though very rarely, attacked by a chorea which in course, duration, and result cannot be distinguished from the disorder so common in the young. Thus Roger¹ has recorded a case in which an old lady of 83 was affected by an ordinary chorea which came on without cause. and was cured in five weeks ; Russell² writes of a woman of 77, who had it mainly on the left side, and recovered in three months ; Sinkler gives a case of a man of 86 who recovered in a few months ; Saundby³ gives two cases, but the histories do not extend for a sufficient length of time to enable them to be classified. Ferguson⁴ had a case in a woman of 74, who after much fatigue in nursing her husband, became somewhat irritable and excitable, and then began to twitch on the left side. She recovered in eleven weeks. In the Collective Investigation Report,⁵ there are several cases which Dr. Mackenzie has grouped together as chorea at exceptional ages. No. 119, by Gowans, is a second attack of chorea following rheumatic fever in a man of 40. No. 223, by Alexander, is a woman of 63, in whom the attack lasted four months. She also had had it before. No. 222, by the same author, is a first attack in a woman of 68, lasting six

¹ 'Gaz. d. Hôp.,' 1854, xxvii. 559.

² 'Lancet,' 1884, ii. 948.

³ 'Med. T. and G.,' 1879, ii. 447.

⁴ 'Lancet,' 1885, ii. 92.

⁵ 'B. M. J.,' 1887, i. 425.

months. Carline records a case, No. 180, of an old woman of 73, in whom a chorea lasted four weeks. She had had several attacks of late years. Aitken describes another case, No. 93, in a woman of 86, lasting one year. Of this kind also is Graves's case¹ of a man of 70, in whom the attack lasted several months, and Gauthier² records an attack in a woman of 75, due to peripheral irritation from extraction of a tooth, similar to those occasionally met with in the young. She recovered after fourteen days.

This class of case is like the chorea of the young, in that it is curable, and lasts a comparatively short though variable time, from a week or two to several months. There is not, however, if we may judge from so few cases, the same tendency to heart disease, nor is rheumatism so frequent an antecedent. In Nos. 119 and 180 of the Collective Investigation Report, and in one of Dr. Saundby's cases, the heart was diseased; in two it is not mentioned; and in Roger's, Russell's, Ferguson's, Gauthier's, and the remaining Collective Investigation cases it is normal. Acute rheumatism had occurred in No. 119, is not mentioned in four cases, and had not occurred in any of the others.

In the next class comes the chorea of coarse sub-cortical lesion, which often follows hemiplegia, sometimes precedes it, and sometimes is without it altogether. Whether, however, there be hemiplegia or no, the class is distinguished by possessing a coarse lesion, deeper than the cortex, and by limitation of the movements to the other side of the body. The lesion is usually a patch of softening, either, as originally described by Charcot, in, or pressing on the posterior part of the internal capsule behind the motor tract, or, as in the case of Gowers,³ and apparently in that of Galvagni,⁴ entirely within the optic thalamus; or again, as in the case of Gee,⁵ in front of the motor tract of the internal capsule. It appears to me probable that Tuckwell's cases of plugging of the posterior and middle cerebral,⁶ so often, but I must think wrongly, quoted

¹ 'Clin. Med.,' i. 537.

² 'J. de Méd. et Chir. Prat.,' 1881, lii. 66.

³ 'BRAIN,' Vol. I. p. 57.

⁴ 'Riv. Clin. d. Bologna,' 1880, x. 268.

⁵ 'St. Barth. Hosp. Rep.,' xvii. 285; and 'Brit. and For. Med. Chi. Rev.,' 1867.

⁶ 'Brit. and For. Med. Chi. Rev.,' 1867.

in support of the theory which ascribes chorea to capillary embolism, are really to be placed in this class.

A third class is formed by a disease of which there are few notices, in which many members of a family are attacked by chorea in adult, or middle life, which lasts till death, and is usually accompanied by insanity. Huntington¹ was the first to describe such cases. I am unable to find his paper in London, and therefore rely on the account of it given by Wharton Sinkler.² Huntington himself, his father, and grandfather, knew some families in Long Island in whom this form had been under observation for many years. It came on gradually, after middle life, and affected males more than females. In most cases, insanity and a tendency to suicide supervened. Ewald³ writes of a mother and two daughters in whom an incurable chorea began at or after thirty, and also of another family in which nine individuals of three generations were similarly afflicted. Peretti⁴ gives a family tree, showing many individuals in three generations affected in middle life with chorea, a considerable proportion of whom were also insane. King⁵ records another family, in three generations of which the disease has appeared, and gives a good description of the condition as he has observed it. These cases began about thirty years of age, were always associated with insanity, and showed a peculiar gait. West, in the *Collective Investigation Report*,⁶ describes another family similarly affected as regards movements, but does not mention insanity in connection with it. There have been no post-mortems recorded of this disease.

The remaining or fourth class of cases differ from the first class by being chronic, and incurable; they differ from the second, in that when a lesion has been found, it has been such as to affect the cortex rather than the deeper parts; and they differ from the third in the absence of any hereditary tendency.

¹ 'Philad. Med. and Surg. Reporter,' 1872, Ap. 13.

² Art. "Chorea" in Pepper's 'System of Med.,' vol. 5, 440.

³ 'Ztschft. f. Klin. Med.,' vii. Supplement H. p. 51.

Peretti, 'Berl. Kl. Wech.,' 1885, No. 52.

'N. Y. Med. Journ.,' 1885, i. 468.

Loc. cit.

This class is divisible into two groups: (1) of cases preceded or accompanied by mania or dementia; (2) of cases with no mental alteration. Of the first group, Hale¹ records the history of a coachman, aged 65, who had chorea for six years, had two attacks of mania during that time, was very intemperate, very irritable, and died of acute bronchitis. He had cerebral pachymeningitis, and his brain was shrunken, very pale, and hard. Maclaren² relates the case of a man of 36, in whom the chorea had begun seven years before, after severe frontal headache. He became childish, and died. He had subarachnoid hæmorrhage over both hemispheres for a considerable area, and general atrophy of the convolutions, with a small spot of softening in the right optic thalamus. The movements were general, not confined to the left side, and therefore probably not to be explained by the disease of the thalamus. Mackenzie Bacon³ describes a woman of 58, in whom the chorea lasted four years, and was combined with mania. Dissection showed chronic arachnitis, a shrunken brain, and a large collection of serum in the ventricles. Macleod⁴ gives three cases. The first is that of a man aged 52, in whom chorea lasted six years; dementia ensued, and he died in coma. He had a subdural hæmorrhagic cyst over both motor areas, and the convolutions were atrophied. The second is a woman aged 62, who had chorea for six years, gradually became demented, and had a similar subdural cyst over the left motor area, with a thick and adherent pia mater. The movements were general. The third is her sister, aged 72, who died in stupor after three years' chorea, and who had several hard tumours in the dura mater. Devis⁵ describes an old man of 79 with dementia, who, while in hospital for a broken thigh, developed left-sided chorea and died, but was not dissected. Berkley⁶ gives a long and careful account of the microscopic examination in the case of a woman of 41, who seven years ago developed chorea five hours after being severely frightened by a murder committed before her. She gradually became demented, and died. He found in the brain

¹ 'Path. Trans.,' v. 16.

² 'Journ. Ment. Sci.,' xxvi. 253.

³ 'Med. T. and G.,' 1879, ii. 446.

⁴ 'Journ. Ment. Sci.,' xx. 97.

⁵ 'Journ. Ment. Sci.,' xxvii. 194.

⁶ 'Philad. Med. News,' xliii. 1883, 200

"dilatation and thickening of arterioles, small gangrenous spots round many vessels; amyloid corpuscles in the lymph sheath; vacuoles in white and grey matter; varicosities of the sheath of Schwann, and absence of axis-cylinders in the nerve fibres; and complete pigmentary degeneration of a large number of the cortical and ganglionic cells, with loss of the prolongations." There were similar changes in the cord, the cellular degeneration being especially marked in the enlargements, while there was considerable antero-lateral sclerosis in the remainder of the cord. The heart was fatty, but without a trace of past or present endocarditis. Bevan Lewis¹ relates the case of a man, aged 56, who had general choreic movements after a paraplegia of the legs six years ago, and who had some mania six months before death. There was congestion of the meninges of the brain, with a granular degeneration throughout the motor cells of the cord, but the cortex of both brain and cerebellum was quite normal to the microscope, and there was nothing amiss in the basal ganglia.

It is of interest to compare with this group Case No. 365 of the Collective Investigation Report, also by Macleod, in which a woman, aged 40, was seized with a severe chorea immediately after blows on the head. There was mania for a month, and the chorea lasted five months. Macleod suggests a lesion in the front of the brain, evidently likening it to the fatal cases he had before recorded.

Of the second group, that in which no dementia or insanity exists, Russell² describes a case which had lasted over eighteen months, and was unrelieved by treatment, the patient being a man of 68. Sinkler³ mentions another in a woman of 82. McLearn⁴ relates a third in a man of 56, in which there was the subjective feeling of heat so common in paralysis agitans. None of these died under observation. Dickinson⁵ had a case in a woman of 54, who died of granular kidneys. Nothing was found post mortem to explain the chorea. I had a case among my out-patients at the West London Hospital in a man of 68, who had had the disease for fifteen years. It affected

¹ 'Journ. Ment. Sci.,' xxx. 256.

² Loc. cit.

³ 'Med. T. and G.,' 1878, ii. 627.

⁴ 'Lancet,' 1885. i. 337.

⁵ 'Med. Chi. Trans.,' lix. 1.

only the right arm and the head, which was continually being jerked to the right side, that is, to the side affected. Although so confined, it was violent. A continually increasing anæmia attacked him, for which he was admitted into the hospital under Dr. Donald Hood, and of which he died. I examined the brain carefully, and could find no abnormality in it whatever, but I regret to say that I did not make a microscopic examination.

A remarkable case is related by Wood,¹ in which a man of 74 suffered amputation of the left thigh for senile gangrene, and five years later began to be affected with irregular clonic spasm, mingled with some tonic spasm, called by Wood "chorea of the stump," which afterwards spread to the arm and face of the same side. There was never any pain connected with the chorea, nor did any kind of peripheral irritation increase it.

Charcot, speaking of the two groups of this class, remarks that in the few cases he has dissected, there has been no endocarditis, and that there is no connection with rheumatism. This is borne out by the other observers who have examined cases after death. I have mislaid the post-mortem notes of my case, but I do not remember any heart disease being found, and there was no murmur during life. The man had never had any previous illness.

It is worth noting that the only cases in which gross disease has been found have been in the insane. That these, however, are not constant in the brain, even in this group, is shown by the results of Bevan Lewis's examination. It is too early to lay any stress upon the changes hitherto recorded. All we can do is to classify the cases according to their clinical symptoms. To fulfil this task is the object of the present paper.

¹ 'Philad. Med. Times,' Nov. 3, 1879, quoted in 'Med. T. and G.,' 1880, i. 16.