# Notes on Three Cases of Chorea Gravidarum.

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The cases here described conform to the type of ordinary or Sydenham's chorea as distinguished from Huntingdon's chorea, a graver disease which is a degenerative condition progressing ultimately and inevitably to dementia with chronic miliary encephalitic or meningo-encephalitic change in the cerebrum.

As regards ætiology, the pregnancy toxæmia theory is, as yet, but slenderly supported, and the view that in these cases we are dealing with Sydenham's or true chorea occurring during pregnancy holds the field. This is not surprising when regard is had to such points as the frequency of the history of previous attacks of chorea and of articular rheumatism; the evidences of endocarditis in so considerable a proportion of cases; the detailed resemblance to Sydenham's chorea and the absence, in the large majority of cases, of any of the commonly accepted evidences of toxæmia, *e.g.*, albuminuria, severe vomiting, etc.

On the more general enquiry as to causation, it must be admitted that the reasons advanced by the supporters of the embolic theory leave not a little to be desired. It may be readily agreed that the provocative lesion must be in large part in the encephalon as distinguished from the spinal cord, and that the corpora striata are especially affected. But the encephalic post-mortem findings are unconvincing, and it remains very difficult, in the absence of further proofs, to concur in the assumption of so high a degree of eclecticism on the part of the emboli for the striata. There can, however, be no question as to the claim that in practically every fatal case of chorea submitted to autopsy vegetations are found on the cardiac valves.

The incidence of the disease is commonest in primigravidæ, though it may recur in subsequent pregnancies, and the onset of the symptoms is more frequent during the earlier three months than the middle or later corresponding terms. As in chorea occurring apart from cyesis, one side of the body may be more affected by the characteristic movements than the other.

The milder cases tend to recover, especially under routine treat-

ment, and most authors agree that such cases rarely, if ever, develop mental symptoms, and that they only exceptionally bring about spontaneous interruption of the pregnancy. The severe types, on the other hand, are frequently associated with abortion or premature labour, and these cases are held to be responsible for a maternal mortality as formidable as 20 per cent. to 30 per cent.

This grave form of the disease is rarely exemplified in cases other than those in which the chorea occurs for the first time in association with pregnancy. In exceptional cases, not necessarily severe in type, the symptoms persist in spite of lapse of time and treatment, and may be projected into the puerperium.

*Treatment.* The milder types respond to rest and a measure of dieting more or less on the lines of Dejerine's dictum "Au lait et au lit," associated with arsenic, bromide, chloral, as symptoms may indicate, and massage in the later stages, especially when paresis of a limb may have replaced or been associated with the choreic movement—screening of the patient to give the impression of the movements being unobserved, is a valuable psychic adjunct. One author claims aspirin in 10 to 15 grain doses every four hours as almost a specific, but I have had no personal experience of its efficacy. It should be borne in mind that in this, as in other forms of disordered function when lapse of time tends to rectification, the drug last used often acquires merit for cure. The treatment of the severe types of chorea gravidarum is a very anxious undertaking. The prognosis, immediate and remote, is bad; drug treatment is largely ineffective; adequate feeding is difficult; evidences of exhaustion supervene and progressively develope; and the mortality-rate, with or without spontaneous termination of the pregnancy, is formidable. There is, I think, sufficient evidence on record to justify the recommendation that, in these cases, the induction of abortion or premature labour before the signs and symptoms of exhaustion become established, is the best line of executive treatment to adopt.

The following is a short account of three cases of chorea gravidarum which have recently come under my care :—

*Case I.* Mrs. R., æt. 26, has had three children. Appendicitis seven years ago—operation. Always has had dysmenorrhœa. History of rheumatism.

*Obstetrical History.* 1. Feb. 1919, 28 weeks, induction. 2. Nov. 1919, three months' miscarriage—twins. Last menstruation early May 1921—expected to be confined the middle of February, 1922. Admitted under Prof. Kennedy, 17/12/21, with history of severe choreic convulsions of two months' duration or more; she had two previous attacks each being precipitated by shock and pregnancy. On admission pregnant six months. Having very frequent choreic convulsions and the general condition appears to be depreciating.

The patient was transferred to the Maternity Department 4/2/22 for observation and necessary treatment. The choreic twitchings had improved but were still present. With physical rest, screening, quietness and an occasional dose of chloral and bromide the condition rapidly cleared up, and for fully two weeks prior to onset of labour no symptoms of chorea were visible.

26/2/22. The pateint went into labour and the birth was normal: labour lasted 20 hours.

The patient made a normal and uninterrupted recovery, being discharged from hospital 18/3/22. There were no more choreic fits and mother and child were both fit and well on discharge. Pulse-rate, temperature and urine had been practically normal throughout the course of the case.

*Case II.* Mrs. H., primigravida, æt. 24. Admitted to the Medical Unit 14/10/21. This patient had chorea 18 months ago which lasted 14 days and finally subsided under medical treatment; she had acute rheumatism six months later and had again shown signs of chorea since 1/10/21, the condition becoming more violent in spite of treatment. She vomited almost continuously for three days previous to admission to hospital.

She is two months pregnant: the tongue is coated, cardiac examination reveals a systolic thrill and an apical systolic bruit, and the general appearance is pallid and very unsatisfactory. She was admitted under Professor Kennedy and in spite of sedative and anti-rheumatic treatment her condition became worse.

In view of the increase of symptoms while under treatment and also on account of the reduced condition generally of the patient she was transferred to the Maternity Department, and 29/10/21 the uterus was evacuated. Almost immediately after this the patient showed improvement, the twitchings becoming very slight in degree and soon disappearing altogether. She was discharged from hospital 17/11/21 completely relieved of all choreic symptoms and with the general condition satisfactory.

Ordinary urinalysis was normal throughout the course of the case.

*Case III.* Mrs. O., æt. 22, primigravida. Admitted 4/2/22 with the history of having had attacks of chorea off and on for the last four years. The chorea was attributed originally to overwork. There had been occasional epistaxis and the patient and her father were often affected with rheumatism.

The patient was six and a half to seven months pregnant.

The left side appears to be powerless for intentional movement: the fingers of both hands move in a jerky manner: the left leg from the knee downwards moves jerkily: speech has been stammering but she is now much improved in this respect. The tongue is protruded and withdrawn in a jerky fashion.

The choreic movements are not exaggerated: the patient can talk quite rationally and she has control over the movements when ordered to. The heart is somewhat hypertrophied but not dilated, and there are no bruits. Urine examination, pulse and temperature so far are normal.

29/3/22. Since admission treatment has consisted of rest, silence, potassium, bromide, arsenic, light diet and general psychic control.

The choreic symptoms are very much improved and the only obvious defect now present is some general excitement and a slightly hysterical manner of speech. The left-hand grip is still appreciably impaired.

Subsequently normal labour took place with good recovery.

Comments.

While no useful average figures or general deductions can be drawn from so small a number of cases, the following points are, perhaps, noteworthy :—

(1) The incidence of the chorea occurred in one case in the early months, and in two cases in the later months of pregnancy.

(2) All the cases afforded a history of antecedent chorea or rheumatism or both.

(3) Two of the cases were of the mild type, one of the rather severe type.

(4) Two of the patients were primigravidæ, and one had given birth to three children.

(5) None of the patients had albuminuria or other evidence of pregnancy-toxæmia.

(6) None showed any tendency to spontaneous abortion or premature labour.

(7) In the severe case, in which abortion was induced, the relief of symptoms was practically immediate.