SIGNIFICANCE OF CONVULSIONS IN INFANCY

BY

P. W. NATHAN, M.B., M.R.C.P.

Neurological Research Unit, Medical Research Council,
National Hospital, Queen Square

AND

P. M. RANSFORD, M.R.C.S., L.R.C.P., D.C.H.

Supernumerary Registrar, Hospital for Sick Children, Great
Ormond Street; Paediatric Registrar, Royal Infirmary, Leicester

There are two opinions about the significance of convulsions in infancy. One is that convulsions within the first two years of life are of no serious significance, that many children have them, and that these children are no more likely than others to have convulsions later in life. This view is often held by parents and general practitioners. Peterman (1939) supports this view, as follows: "The young child is subject to certain hazards and diseases. These diseases are characterized by a tendency to produce convulsions. Once these hazards have been safely passed, the child is no more susceptible to seizures than is the adult under similar circumstances." The second opinion is favoured by neurologists. They usually hold that infantile convulsions are the early manifestation of epilepsy. Turner (1907) found in his series of 1,000 epileptics that the greatest number beginning in any single year occurred in the first year of life.

The purpose of this paper is to present some evidence which may contribute to the formation of an opinion on the significance of these convulsions.

Present Investigation

The evidence is based on observations obtained from two groups—a group of 200 patients attending hospital as out-patients on account of epilepsy, and a control group. Each group is subdivided into two according to age—namely, one to contain subjects aged 2 to 15 years, and the other to contain those from 15 to 35. The 100 controls aged 2 to 15 were out-patients at the Hospital for Sick Children or at the Leicester Royal Infirmary, which they were attending for disorders other than epilepsy; the 100 controls from 15 to 35 were acquaintances of one of us (P.W.N.), and included a large number of hospital workers, nurses, technicians, and doctors. The 200 epileptics were out-patients attending the National Hospital on account of this disorder.

It will be understood that in the epileptic groups there is selection to the extent that no one is included who has to live in an institution—such as an epileptic colony, an institute for mental defectives, or a mental hospital. The epileptics are those who remain within the normal community, living in their own homes, attending London schools, and working; and those in the control groups are their counterparts, but having no fits. No one was admitted into the control group unless he was able to find out from his parents whether he had had infantile convulsions; also, in the epileptic group the history was always obtained from a parent, who was asked about the occurrence of any convulsions, fits, faints, sudden stiffenings with loss of consciousness, or facial expression of vacant staring.

Of the control subjects, two (2%) in each age group had had infantile convulsions. Of the 100 epileptic subjects from 2 to 15, 34 had had infantile convulsions, and of the 100 from 15 to 35, 14 had had infantile convulsions.

This pronounced difference—2% in the control groups and 14% and 34% in the epileptic groups—makes it clear that convulsions within the first two years of life are to be taken as a manifestation of epilepsy, and that the subject so afflicted is likely to have a recurrence of fits in later years. It also seems that the recurrence is likely to show itself before the fifteenth year. It is of interest that this percentage of those having a recurrence of fits before the age of 15 is so much higher than that of those having a recurrence after the age of 15. This may indicate that the longer the child lives free from convulsions the less likely he is to have any.

The question arises, If convulsions within the first two years of life indicate that the child is an epileptic, should some treatment be started? General neurological opinion holds that the longer the subject remains free from attacks the less likely he is to have further attacks. The lower percentage in the older epileptic group supports this belief. This observation upholds the view that any child having convulsions should be treated with anticonvulsant drugs for a prolonged period, and possibly for years.

REFERENCES

- Peterman, M. G. (1939). *J. Amer. med. Ass.*, **113**, 194.
Turner, W. A. (1907). *Epilepsy*. Macmillan, London.

Medical Memoranda

Bilateral Hydrosalpinx with Torsion of Both Tubes

Torsion of the Fallopian tube is an uncommon condition, but cases are reported in the literature fairly regularly. Anspach (1912) was able to collect 95 cases, and in 62 of them the lesion of the tube was a hydrosalpinx. Eastman (1927) brought the number of cases of torsion of hydrosalpinx up to 91, and Goldberg and Olim (1938) increased the figure to 108. The condition, therefore, is not excessively rare, but bilateral torsion is extremely uncommon. Anspach records seven instances in his paper, and since then additional cases have been described by Sénéchal (1932), Pineda and Campagnoli (1934), and Ficklen (1938).

CASE REPORT

A nulliparous married woman aged 24 was admitted to the West Middlesex County Hospital on May 31, 1948, complaining of a sharp knife-like pain in the right loin, radiating round to the front of the abdomen and down to the pubes, of twenty-four hours' duration. There had been nausea but no vomiting. Her bowels had been regular and micturition had been normal apart from slight difficulty in initiating the act since the onset of the pain. Her periods took place every 23 days and lasted seven days. She experienced some backache on the first day. Her next period was expected on the day after her admission, and in fact it began that day. She complained of some yellow vaginal discharge which was most pronounced on the two days before the onset of menstruation. Her previous health had been good; she had never experienced a similar attack of pain in the past. She had undergone two minor operations for the correction of a narrow introitus.

On physical examination her temperature was 100° F. (37.8° C.), pulse rate 92, and respirations 20. The tongue had a moist white coat. The abdomen moved fairly well on respiration, and there was slight tenderness and muscle-guarding in the lower quadrants of the abdomen, greater on the right side than on the left. Rectal examination revealed the presence of two cystic swellings (or one bilobular swelling) in the pouch

of Douglas, each about the size of a tangerine and attached to the back of the uterus. They were moderately tender. This finding was confirmed on vaginal examination. The white cells numbered 15,000 per c.mm., of which 77% were polymorphs. A radiograph of the pelvis showed the presence of a cluster

Above—the right hydrosalpinx. Below—the left hydrosalpinx with the associated dermoid cyst, opened to show teeth and hair.

of teeth in front of the sacrum and a little to the left of the midline. A diagnosis of twisted or infected dermoid ovarian cyst was made.

Operation.—On June 4 the abdomen was opened through a midline subumbilical incision. The left ovary was replaced by a dermoid cyst the size of a large pear. There was a left hydrosalpinx the size of a hen's egg which had undergone torsion

about one and a half times in a clockwise direction. It was blue in colour and had a congested appearance which improved when the torsion was undone. On the right side there was also a hydrosalpinx which had undergone torsion. It was the size of a duck's egg and was purplish red. It was clearly the seat of strangulation. The twist was also about one and a half times in a clockwise direction. The point of torsion was at the junction of the normal and cystic portions of the tube about 1 in. (2.5 cm.) from the cornu of the uterus. At this point the tube was constricted by a narrow omental adhesion. The right ovary was about the normal size, but was studded with small cysts. A left salpingo-oophorectomy and a right salpingectomy were performed, the severed end of the right tube being left open. The appendix was removed and the abdomen closed.

Convalescence after operation was uneventful and the patient returned home on June 17. Her customary menstrual cycle has continued since the operation.

The specimens have been mounted for preservation in the hospital museum, and consequently no histological examination of the tubes has been made.

COMMENT

The left hydrosalpinx was in a state of simple torsion without gross interference with the blood supply, while the right tube had undergone torsion with strangulation, converting the hydrosalpinx into a haematosalpinx. The patient's symptoms were produced by the lesion of the right tube; the twist of the left tube was a coincidental finding. The omental adhesion around the point of torsion of the right tube may have been an important factor in

producing the twist by constricting the area of attachment of the hydrosalpinx. The dermoid cyst of the left ovary had not taken part in the torsion of the left tube and did not seem to have had anything to do with its production.

A study of the recorded cases of torsion of the Fallopian tube reveals that in the majority of cases the tube is the seat of disease, although a normal tube may undergo this complication. The commonest lesion is a hydrosalpinx, and this fact is well shown in the figures quoted above from Anspach's paper. A hydrosalpinx satisfies the conditions required for torsion of an organ—namely, a freely mobile tumour attached to a more or less fixed base by a pedicle. A pyosalpinx, on the other hand, is much less likely to undergo torsion because of surrounding adhesions which limit its mobility.

The clinical picture of torsion of the tube resembles that of torsion of an ovarian cyst, for which it has often been mistaken, but differs in that the symptoms are much less severe, and also in that shock is not a feature of the condition.

I wish to thank Mr. John Scholefield, under whose care the patient was admitted, for guidance and for permission to publish this case.

RICHARD E. SHAW, Ch.M., F.R.C.S.,
Chief Assistant in Surgery, West Middlesex Hospital.

REFERENCES

- Anspach, B. M. (1912). *Amer. J. Obstet.*, **66**, 553.
Eastman, N. J. (1927). *Surg. Gynec. Obstet.*, **45**, 143.
Ficklen, E. A. (1938). *Surgery*, **4**, 384.
Goldberg, S. L., and Olim, C. (1938). *Amer. J. Obstet. Gynec.*, **35**, 699.
Pineda, R., and Campagnoli, G. (1934). *Bol. Soc. Obstet. Gynec., B. Aires*, **22**, 371.
Sénéchal, M. (1932). *Rev. franç. Gynec.*, **27**, 146.

Leiomyosarcoma of the Stomach

Leiomyosarcoma is one of the rarest tumours of the stomach, comprising only 10% of all gastric sarcomas. Ewing (1940) estimated that 1% of malignant tumours of the stomach were sarcomatous. At the Mayo Clinic in one year, however, of 298 malignant lesions of the stomach 3.3% were sarcomas (Counseller *et al.*, 1946). Edwards and Wright (1933) thought the condition more common than the number of reported cases indicated.

CASE REPORT

The patient was a Bantu woman aged 21. She had four years' history of attacks of severe epigastric pain, which was unrelated to meals but worse before her periods. For the last six months she had continuous pain and frequent vomiting, the vomitus being pale and never coffee-ground in appearance. Her appetite was good, but she had lost a great deal of weight and was becoming progressively weaker. Her diet was predominantly carbohydrate, and her home conditions were poor.

On examination she was cachectic and too weak to stand. The temperature was 100° F. (37.8° C.) and pulse 120. In the abdomen a hard, tender mass was felt occupying the costal angle; there was a second mass under the left costal margin which appeared to be connected with the liver. Both masses were felt only on deep inspiration. There were no other physical signs.

The patient stopped vomiting on the day of admission. She exhibited a remittent temperature which frequently reached 102° F. (38.9° C.). A chest radiograph showed clear lung fields but a raised left diaphragm. She was too ill for screening.

The blood count demonstrated a hyperchromic anaemia, with metachromasia and anisocytosis. The r.b.c. was four million, the Hb 77%, and the colour index 1.1. The w.b.c. was 13,000, of which 79% were polymorphs. Examination of the sternal marrow showed a macronormoblastic reaction. A fractional test meal revealed complete absence of free HCl, a low total acidity in the resting juice, and no rise in response to a gruel