Medical Memoranda

Torsion of a Tuberculous Pyosalpinx

Torsion of the Fallopian tube has been reported in this *Journal* by de Soldenhoff (1949) and Shaw (1949). It is a relatively rare condition, the total number of recorded cases since 1890 being about 120. In most cases the affected tube was diseased.

The following case of a twisted tuberculous pyosalpinx is worth recording because of its rarity and unusual clinical features.

Case Report

A nulliparous woman aged 21 was admitted to St. Giles's Hospital on August 14, 1949, complaining of dull lower abdominal pain of 48 hours' duration. The pain was of sudden onset and followed a short attack of diarrhoea,

Above: Torsion of tuberculous pyosalpinx, showing marked congestion and early gangrene. Below: Normal appendix from the same case.

being at first general, and becoming localized in the R.I.F. some hours later. During the last 12 hours it had again become generalized, but remained maximal in the R.I.F. There was anorexia but no nausea or vomiting. Constipation followed the initial attack of diarrhoea. Flatus was passed a few hours before admission. During the last 24 hours scalding pain on micturition without frequency occurred. The gynaecological history, including the last menstrual period three weeks previously, was normal. Apart from occasional abdominal fullness

after meals she had no previous abdominal trouble. During a routine examination in January, 1946, pulmonary tuberculosis was discovered. In May, 1946, a phrenic crush was performed. She was discharged after four months of sanatorium treatment and had remained symptom-free since.

On examination she was seen to be a well-built woman; facies slightly flushed; throat normal; tongue clean; temperature 100.6° F. (38.1° C.), pulse 124, respirations 22. Abdomen: normal appearance, soft, reflexes present; marked tenderness and guarding on deep pressure in R.I.F. and slightly in L.I.F.; positive Rovsing's sign and Cope's psoas test; shifting dullness in lower abdomen; a few borborygmi heard. P.R.: Very tender on right lateral rectal wall. P.V.: Nil; no palpable mass on bimanual palpation. Urine examination: Acetone ++, otherwise nil. E.S.R. 66. Blood count: red cells, 4,500,000; Hb, 72%; C.I., 80; white cells, 16,900 (normal differential count).

Acute appendicitis with pelvic peritonitis was diagnosed. Findings at operation (performed shortly after admission): A moderate amount of blood-stained fluid in peritoneal cavity; a dark plum-coloured, congested, mobile mass, the size and shape of a large pear, lying against lower caecum in R.I.F. (see photograph). Appendix normal. Mass proved to be right Fallopian tube, enormously dilated in its distal four-fifths. Most of the dilated portion had risen from the

pelvis and, hanging over the pelvic brim, had become an abdominal organ. Both ovaries and uterus normal in appearance and position. No adhesions. The right tube had become twisted five times in a clockwise direction, at the junction of the normal and dilated portions, resulting in complete strangulation, early gangrene, and pelvic peritonitis. No improvement in colour noticed on correction of torsion. Salpingectomy performed. Abdomen closed without drainage.

Tube contained thick, green-yellow, odourless pus. The post-operative diagnosis was acute torsion of a tuberculous pyosalpinx. This was confirmed by pathological examination: (1) Löwenstein culture: tubercle bacilli present. (2) Section: Greatly enlarged and distended Fallopian tube. Contents resembled caseous material. Section of wall showed granulation tissue containing a few tubercle bacilli.

Recovery was uneventful. The patient was discharged on the twelfth post-operative day and has since remained well.

Comment

This case resembled acute appendicitis. Features suggestive of tubal torsion (Cope, 1940; Nixon, 1948) were missing—for example, simultaneous pain and vomiting, and a palpable mass. The characteristics of tuberculous salpingitis (Dible and Davie, 1945) were also absent—for example, signs of chronic salpingitis, tubal thickening, contraction, dense pelvic adhesions, caseation, and abscess formation.

The aetiology of the torsion is obscure. In the absence of adhesions it may have been started by the curious initial short attack of diarrhoea, leading to violent peristalsis, and aided by a long pedicle.

I wish to thank Dr. W. Feldman, medical superintendent, St. Giles's Hospital, for permission to publish this case. I am grateful to Dr. E. Brand, pathologist, Park Hospital, for his report.

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A Second Attack of Poliomyelitis

Second attacks of poliomyelitis, though very uncommon, have been reported by Alves and Pugh (1947) and by Lipscomb (1947). Older literature in this respect was reviewed by Wilson (1940). Attention has also been drawn to the effect of exercise in precipitating paralysis in poliomyelitis (Russell, 1947).

The following case, in which the paralysis of the second attack was probably precipitated by violent exercise, seems worthy of publication.

Case Report

A recently qualified medical man aged 24, of distinctive athletic ability, had obtained a house appointment in a London teaching hospital. His past medical history included typhoid, blackwater fever, and chronic sinusitis.

First Attack.—In September, 1947, while still a medical student, he underwent an operation for diverticulum of the bladder. Ten days after the operation he complained of headache, with photophobia, and pain in the back. His

temperature was 101° F. (38.3° C.). He had moderate neck rigidity and a positive Kernig sign. The cerebrospinal fluid showed a pressure of 80 mm. water, three cells per c.mm., and 30 mg. of protein per 100 ml. He developed some weakness of the left triceps and left extensor carpi radialis, and of the left foot. He was seen by a neurologist, who regarded the condition as a mild case of poliomyelitis with every prospect of complete recovery. He did in fact make an excellent recovery, but admitted to some residual weakness in the left foot, sufficient to keep him out of first-class rugby.

Second Attack.—On January 13, 1950, he reported sick with profuse sweating, increasing pain in the lower right chest, and hiccup. There was no dyspnoea, cough, fever, or other symptom. Later his temperature rose to 100.4° F. (38° C.), and the hiccup caused considerable distress. The throat, lungs, and abdomen were normal except for some tenderness of the recti abdominis. The evening temperature was 99.8° F. (37.7° C.); the pulse and respirations were normal. The following morning his temperature was up to 102.4° F. (39.1° C.), but was normal by the evening, and remained so the day after, when the pain had almost gone but some hiccup and headache remained. The chest examination and differential white cell count were normal. On January 17 he was free from pain and his temperature had been normal for 48 hours. He felt very well, and was given permission to go. A diagnosis of Bornholm disease had been made.

Apparently he felt quite well until the evening of January 19, when, while engaged in a violent game of squash, he developed a severe headache and later vomited. The headache persisting, he took some "veganin" tablets and went to bed. Next day he went away for the weekend, although not feeling well, and joined a party at a cinema in the evening. He felt cold and shivery, but as it was a bitterly cold night little notice was taken of this. He admitted to having a headache and feeling not well. Afterwards at supper he appeared to enjoy his meal and was quite bright and cheerful. He took some veganin and a hot toddy and went to bed early.

It had been intended to allow him to sleep late, but, movements being heard in his room, he was visited by his host, who immediately realized that he was seriously ill, with marked meningitic symptoms—namely, severe headache, neck rigidity, positive Kernig sign, and left plantar response extensor. He was perfectly clear mentally; his conjunctivae were congested, and photophobia was intense. His temperature was 100.4° F. (38° C.), pulse 100. Occipital and trapezius muscles were tender, but there was no tenderness elsewhere, and he was otherwise normal.

Specialists were called in, and they diagnosed poliomyelitis. In consequence he was removed to hospital, where the diagnosis was confirmed by the physician-superintendent. While awaiting removal to hospital he began to vomit, and this persisted. On admission he was found to have marked photophobia, intense headache, stiffness of the back and neck muscles, and his knee-jerks were brisk and plantar responses extensor. His abdominal reflexes were absent. Kernig's sign was present, and there was muscle tenderness. By the afternoon of January 21 there was some weakness of the adductors of the thighs, and the knee-jerks, though present, were diminished in activity. In view of the diagnosis of poliomyelitis it was at this stage considered inadvisable to do a lumbar puncture.

On January 22 he was still complaining of severe headache, and vomited at intervals. While he was being prepared for lumbar puncture his condition worsened, and he resented movement. He complained of respiratory embarrassment, which was obvious, the movements of his diaphragm and intercostals being weak. He was immediately placed in a Both respirator, where his condition improved, and he appeared cheerful but somewhat apprehensive. He had a comparatively restless night, having failed to sleep, though hypnotics were administered, and he was rational and in comparatively good condition on

January 23. His neck, back, and limbs were still hyperaesthetic; the headache persisted, but the vomiting had ceased. There was no interference with speech, but some difficulty in swallowing. Suddenly, without any warning, he became cyanosed; speech became difficult, and his condition critical. He died of cardiac and respiratory failure an hour later.

Sections of the spinal cord and brain were taken at necropsy, and the pathologist reported: "Sections from the lower cervical, thoracic, and lumbar regions show the characteristic changes of acute poliomyelitis. The grey matter shows much infiltration with inflammatory cells, including many polymorphonuclears; the motor nerve cells are necrotic; and the blood vessels show perivascular cuffing. The medulla also shows focal areas of inflammation and perivascular cuffing, but the pons and optic thalamus are normal."

Comment

On the evidence available this man had two attacks of poliomyelitis within just over two and a half years, the first being mild, from which almost full recovery was made, and the second a fulminating attack, which caused death. The second attack ran a typical course showing plainly the biphasic progress (McAlpine *et al.*, 1947) of the disease, there being an interval of two to three days between the illness of the invasion and the onset of the paralytic phase. During the remission he felt well enough to play such a strenuous game as squash. It is possible that had he remained quietly in bed during this remission the illness would have terminated as an abortive attack of poliomyelitis, without paralysis.

I am indebted to Dr. Douglas McAlpine for his suggestion that I should publish this case; to Dr. R. J. McGill, Dr. D. J. N. McNab, M.O.H., Christchurch, and Dr. George Chesney; and to the teaching hospital for supplying the patient's previous medical history and notes on the first phase of his second illness.

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The latest issue of the *Bulletin of Animal Behaviour*, an occasional publication of the Association for the Study of Animal Behaviour (Cromwell House, Huntingdon), contains several interesting articles, including English translations of three recent papers by Professor K. von Frisch on the language of bees and on their orientation. As is now well known, bees communicate by dancing in certain significant patterns, and it has now been shown that they can perceive the plane of polarization of the light reflected from the sky—the plane changing as the sun changes its position throughout the day. In this way bees, and apparently ants also, can find their way about with reference to the sun's position even when the sun itself is obscured by cloud. The careful experiments described in the paper make these ideas, which at first seemed fantastic, completely credible and convincing. Another article, by Professor O. Koehler, discusses the ability of birds to count. He points out how careful one must be in animal experiments not to give away the right answers to test questions by some slight unconscious sign. The horse Clever Hans, for instance, which was at first thought to be capable of complex mathematics, was in actual fact only an adept at responding to the tension felt by his master as the correct answer was approached. In the latest work, however, ravens, parrots, jackdaws, and other birds have been shown able to count in the complete absence of human beings—when it was to their advantage to do so.