FOUR CASES OF PNEUMOCOCCAL PERITONITIS

BY

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Acute pneumococcal peritonitis is an uncommon disease. The use of surgery with the administration of sulphapyridine illustrates an advance which has taken place in the treatment of this type of peritonitis during the last few years. Before the introduction of Felton's type antipneumococcal serum and sulphapyridine, pneumococcal peritonitis was an extremely fatal disease. Following the administration of the serum a certain number of these patients got well, and there is a distinct hope that the introduction of sulphapyridine will further reduce the mortality.

When I was house-surgeon to Mr. H. J. (now Sir Holburt) Waring I was able to collect, with Mr. A. L. Moreton, 6 cases of this disease that had been admitted to Mr. Waring's wards, all of which were fatal (Noon and Moreton, 1912). Similar results were recorded by other observers.

Rischbieth (1911) gives statistics of 57 cases of pneumococcal peritonitis. Of these, 45 were cases of acute general peritonitis, with a mortality of 100%.

Sir Dyce Duckworth and Mr. H. Marsh (1904) recorded a case successfully treated by operation and antipneumococcal serum. They refer to other cases, none of which, however, recovered. Up till 1932 further cases of acute pneumococcal peritonitis came under my care, but all proved fatal. Since 1932 I have had 4 cases, all of which have recovered. These seem to be of sufficient interest to justify publication. Three of them were treated by laparotomy with drainage of the pelvic cavity and intramuscular injections of antipneumococcal serum, Felton's type, and the fourth by laparotomy with drainage and the administration of sulphapyridine. While, however, the first three gave rise to considerable anxiety and recovered only after a long illness, the fourth caused no anxiety and made a rapid recovery.

Case I

Pneumococcal peritonitis. Laparotomy; protracted pyrexia. Recovery

A schoolgirl aged 8 was admitted to the Norfolk and Norwich Hospital on April 6, 1932, complaining of severe abdominal pain with vomiting. On the day before admission she was said to have received a severe blow in the abdomen when returning from school.

On admission she looked ill; her temperature was 101.5°, and the pulse rate 124. The abdomen was distended, rigid, and tender. A diagnosis of acute peritonitis was made. The abdomen was opened, revealing acutely inflamed intestine and a large collection of thick yellow pus in the pelvis. The appendix, which was not inflamed, was removed. The abdomen was closed, with drainage. Examination of pus showed a pure culture of pneumococcus, Type II.

She was treated by injections of antipneumococcal serum, Types I and II (Parke, Davis), 10,000 units being given daily from April 7 to 12. She made satisfactory progress, and was discharged from hospital in good health on June 4.

Case II

Acute pneumococcal peritonitis. Laparotomy; double empyema; right side of chest drained; left side aspirated. Complete recovery

A school teacher aged 23 was admitted to a nursing home on June 5, 1933, complaining of severe abdominal pain and

diarrhoea. Temperature 104°; pulse rate 120. She had been ill for four days.

On examination she looked ill and anxious; her temperature was 102.8° and pulse 140. The abdomen was distended, rigid, and tender. An abdominal operation scar showed that the appendix had been removed some years ago. A provisional diagnosis of acute pneumococcal peritonitis was made. The abdomen was opened and the peritoneal covers of the intestine were found to be red and inflamed. There were some flakes of lymph and some flocculent inodorous pus. The latter was mopped up and the abdomen closed with drainage. An intramuscular injection of 20,000 units of antipneumococcal serum was given, with a further 10,000 units on June 6 and 10. On July 3 the blood leucocyte count was 28,400 per c.mm. Signs at the base of the right lung continued to increase. On July 7 a right-sided empyema was drained by the resection of a piece of rib. Improvement followed this operation. About two weeks later signs began to develop at the base of the left lung, and purulent fluid was aspirated. Accumulation of fluid did not recur. The empyema wound on the right side of the chest continued to discharge. The patient left the nursing home on August 14, after a very severe illness lasting ten weeks. She gained weight, and finally recovered completely.

Case III

Acute pneumococcal peritonitis. Laparotomy; protracted pyrexia. Recovery

A schoolgirl aged 9 was admitted to the Norfolk and Norwich Hospital on March 12, 1937, complaining of acute abdominal pain and vomiting.

On examination she looked ill; her temperature was 102° and pulse rate 128. The abdomen was not distended, but was rigid and tender. A diagnosis of acute peritonitis was made. The abdomen was opened, and the small intestine was seen to be covered with flaky lymph. The appendix, which was not inflamed, was removed and the abdomen closed with drainage. Examination of pus revealed pneumococci. Blood culture following the operation grew pneumococci. The patient was given 10,000 units of antipneumococcal serum intramuscularly for three days following operation, and made gradual progress towards recovery, being discharged on May 29.

Case IV

Acute pneumococcal peritonitis. Laparotomy; post-operative treatment with sulphapyridine

A female laundry worker aged 18 was admitted to the Norfolk and Norwich Hospital on October 2, 1940, complaining of acute abdominal pain, vomiting, and diarrhoea. She had been ill for three days.

On examination she looked anxious; her face was flushed and the tongue rather red and dry. The temperature was 104° and the pulse 160. The abdomen was somewhat distended, with marked tenderness below the navel and to the right of the midline. A diagnosis of general peritonitis, cause uncertain, was made. The abdomen was opened on the day of admission. The peritoneal surface of the intestines was red and inflamed; there were also some inflamed and enlarged mesenteric glands in the region of the caecum. The appendix was not inflamed, but was removed. There was some inodorous yellowish-green pus in the pelvis; this was removed. The abdomen was closed, with pelvic drainage. Examination of the pus revealed pneumococci.

The pneumococcal infection was treated with sulphapyridine, given partly by mouth and partly intravenously. Between October 2 and 6 36 grammes were administered as follows: First day, 4 grammes; second day, 10 grammes; third day, 8 grammes; fifth day, 12 grammes; sixth day, 2 grammes. The dosage was determined by the clinical signs of the severity of the infection. The wound continued to discharge until November 1, but by November 6 it was healed. The patient's local and general condition continued to be satisfactory, and she was able to leave hospital.

REFERENCES

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