Idiopathic sclerosing peritonitis

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Summary: A girl of 12 years old presented with acute small bowel obstruction nine weeks after an uncomplicated appendectomy. The obstruction was found to be due to the development of sclerosing peritonitis. Previous reports of this rare condition have suggested that it is predominantly found in adolescent girls residing in subtropical climates.

Introduction

Sclerosing peritonitis is now a rare condition which has been most commonly reported to occur following long term oral practolol therapy (Jackson, 1977), chronic ambulatory peritoneal dialysis (Bradley *et al.*, 1983) and with use of the LeVeen peritoneal-venous shunt (Cambria & Shamberger, 1984).

Case report

A 12 year old white girl underwent an uncomplicated appendectomy. The appendix was not found to be inflamed but its lumen was full of pinworms. This infestation was treated by oral mebendazole for 3 d.

Nine weeks postoperatively the patient was readmitted with a 2 d history of intestinal obstruction, thought to be secondary to adhesions. A laparotomy was undertaken following failure of conservative management. The stomach, duodenum and proximal 100 cm of jejunum were normal, as were the pelvic contents, the colon, apart from the caecum, and the parietal peritoneum. The distal jejunum, the whole of the ileum and the caecum were matted together by a thick 'plastic' membrane which extended onto the mesentery (Figure 1). The total length of involved bowel measured 275 cm. Large fleshy mesenteric lymph nodes were palpable.

By entering a plane between serosa and membrane, the latter was dissected from the involved bowel. The intestine was intubated by means of a 2.5 metre Anderson tube; the proximal end being brought out through a jejunostomy. Extubation occurred 4 weeks postoperatively and 7 months later the patient has had no further complications.

Histological sections of the resected membrane demonstrated fibrous tissue with a few non-specific

Figure 1 Operative photograph demonstrating thick membrane encasing the small bowel.

granulomata. In particular, no birefringent starch granules were seen when the material was examined under polarized light and neither was there any evidence of pinworm. Dermal starch sensitivity was assessed postoperatively, as recommended by Grant *et al.* (1982). There was no skin reaction and the skin biopsy of the injected site failed to demonstrate either organized granulomata or other signs of inflammation.

Discussion

Sclerosing peritonitis is now a rare condition which has been most commonly reported to occur following

long term oral practolol therapy (Jackson, 1977). Eight cases of small intestinal obstruction have been reported to occur in adolescent girls in Singapore (Foo *et al.*, 1978); in these cases the obstruction was caused by a thick membrane encasing the small bowel, a state they described as the 'abdominal cocoon'. This condition appears to affect only adolescent girls and reports would suggest that it occurs predominantly in sub-tropical climates (Foo *et al.*, 1978; Sieck *et al.*, 1983). Only 5 cases are thought to have been reported from Europe (Hartmann, 1942; Sayfan *et al.* 1979).

Intestinal obstruction due to starch granuloma formation usually occurs within 2–3 months of the initial operation. In the present case it appears highly unlikely that the development of the membrane was secondary to intraperitoneal starch contamination since neither the macroscopical nor microscopical features of this condition were observed. This view is reinforced by the negative reaction to the dermal starch provocation test that occurred in this patient.

References

- BRADLEY, J.A., McWHINNIE, D.L., HAMILTON, D.H.N., STARNES, F., MACPHERSON, S.G., LEYWRIGHT, M., BRIGGS, J.D. & JUNOR, B.J. (1983). Sclerosing obstructive peritonitis after continuous ambulatory peritoneal dialysis. *Lancet*, **ii**, 113.
- CAMBRIA, R.P. & SHAMBERGER, R.C. (1984). Small bowel obstruction caused by the abdominal cocoon syndrome: possible association with the LeVeen shunt. *Surgery*, **95**, 501.
- FOO, K.T., NG, K.C., RAUFF, W.C., FOONG, W.C. & SINNIAH, R. (1978). Unusual small intestinal obstruction in adolescent girls: the abdominal cocoon. *British Journal of Surgery*, **65**, 427.
- GRANT, J.B.F., DAVIES, H.J., ESPINER, W.K. & ELTRINGHAM, W.K. (1982). Diagnosis of granulomatous starch peritonitis by delayed hypersensitivity skin reaction. *British Journal of Surgery*, **69**, 197.
- HARTMANN, W. (1942). Peritonitis fibroplastica. *Deutsche Zeitschrift für Chirurgie*, **255**, 173.
- JACKSON, B.T. (1977). Surgical treatment of sclerosing peritonitis caused by practolol. *British Journal of Surgery*, **64**, 255.
- SAYFAN, J., ADAM, Y.G. & REIF, R. (1979). Peritoneal encapsulation in childhood. *American Journal of Surgery*, **138**, 725.
- SIECK, J.O., COWGILL, R. & LARKWORTHY, W. (1983). Peritoneal encapsulation and abdominal cocoon. Case reports and a review of the literature. *Gastroenterology*, **84**, 1597.

Acknowledgement

We would like to thank Mrs A. Simmonds for typing the manuscript.