Peritonitis due to perforated mesenteric fibroma – an hormonal aetiology?

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Summary: Peritonitis is a very rare complication of mesenteric fibromatosis. A case is reported which occurred 6 days post-partum. It is suggested that such lesions are hormone-sensitive.

Introduction

Mesenteric fibromatosis is rare. Peritonitis due to intra-abdominal fibromatosis is very rare and has been reported on only five occasions. It has not been related to pregnancy. It is recognized that hormonal factors influence abdominal wall fibromatosis,¹ but not intra-abdominal fibromatosis. The lesion reported here grew rapidly during pregnancy and perforated immediately post-partum, suggesting that hormonal factors also affect mesenteric fibromas.

Case report

A 33 year old woman was admitted as an emergency with generalized abdominal pain. Ten days prior to admission she had given birth vaginally to a healthy baby girl. Six days after childbirth the patient developed colicky lower abdominal pain which then became constant and generalized. She complained of abdominal distension but had not vomited.

On examination she was pyrexial (38°C), tachycardic (96) and distressed. Her abdomen was distended and tender throughout with guarding. Abdominal X-rays were unhelpful. A diagnosis of peritonitis was made, the cause of which was uncertain.

She underwent an urgent laparotomy. A large mass measuring 25 × 20 cm was found arising in the mesentery of the ileum. The appendix was normal.

There were approximately 750 ml of free yellow-green purulent fluid in the peritoneal cavity. There were two holes in the mass which had a necrotic centre. Peritoneal fluid was sent for bacteriological analysis, a biopsy of the mass was taken and peritoneal toilet performed. Following this procedure the patient made a rapid recovery.

Bacteriology of the peritoneal pus grew *Streptococcus milleri*. Histology of the biopsy showed non-specific inflammation with no evidence of malignancy. She was allowed home after 7 days. Arrangements were made for an outpatient computed tomographic (CT) scan.

One month after discharge from hospital she was re-admitted with low back pain, night sweats and an increase in the size of the abdominal mass. On examination she was pyrexial (38.5°C) with a large tender mass in the mid-abdomen.

A CT scan was performed and revealed a mass (15.5 × 10.0 cm) with walls of variable thickness and mixed contents. A precise diagnosis could not be made but because of the possibility of an abscess, aspiration of the mass was performed. The patient's general condition did not improve on appropriate antibiotic therapy so a second laparotomy was performed.

At operation there was a small amount of free fluid and the mesenteric mass was unchanged. Frozen section histology was highly suggestive of a leiomyoma or leiomyosarcoma so the mass was excised. Because of the intimate relationship with the caecum and ascending colon an extended right hemicolectomy was performed. Paraffin section histology showed mesenteric fibromatosis. There were no colonic polyps, neither in the specimen nor on sigmoidoscopy. The patient made a full recovery with no symptomatic recurrence at 2 months' follow-up.

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Discussion

The first case of peritonitis secondary to mesenteric fibromatosis was reported in 1960.² Since then there have been four further case reports. All are in patients with Gardner's syndrome.²⁻⁶ The patient presented here did not have Gardner's syndrome.

Fibromatosis is rare. The incidence of desmoid tumour, which is a particular variant of fibromatosis, has been estimated at between 2.4 and 4.3 new cases per million inhabitants per year in Finland.⁷ The mesenteric fibroma in the case described here grew rapidly during pregnancy. No abnormality had been noted on the ultrasound scan at 16 weeks' gestation, but within approximately 6 months a 25×20 cm mass had developed. The clinical presentation immediately post-partum was dramatic.

It is recognized that desmoid tumours cease to grow and even regress after the menopause.⁸ There is a high incidence in pregnant females of

abdominal wall desmoid tumours.⁹ However, although childbirth has been implicated in the development of abdominal wall desmoids, no relationship with pregnancy has been noted with intra-abdominal desmoids, including mesenteric fibromata.¹⁰

Abdominal wall desmoids have developed in men undergoing oestrogen therapy for prostatic cancer, and have regressed on stopping treatment.⁹ Tamoxifen therapy has been successfully used in parietal desmoid tumours. Symptomatic relief and a marked reduction in size of desmoid tumours have occurred.¹¹ After a 3 month course of tamoxifen, an abdominal wall lesion disappeared completely.¹²

Although the hormone dependence of abdominal wall lesions is well established, the effects of changes in oestrogen levels on intra-abdominal lesions is not generally accepted. The case presented here indicates that hormonal factors play a role in the development of mesenteric fibromatosis, and its complications.

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