CASE REPORT

Diagnosing peritoneal tuberculosis

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SUMMARY

A 37-year-old male healthcare worker presented to the medical assessment unit complaining of a 3-month history of lethargy, weight loss, night sweats and intermittent abdominal discomfort. On examination there was some dullness to percussion at the right lung base and decreased breath sounds. He had mild generalised tenderness in his abdomen. Blood tests were normal. Chest x-ray and CT of the thorax showed small bilateral pleural effusions with no other abnormality. CT of the abdomen and pelvis however, showed ascites with extensive thickening of the peritoneum and marked induration of the mesentery and omentum. Mantoux test was positive. Laparoscopy was undertaken to outrule intra-abdominal malignancy and confirmed the diagnosis of tuberculosis. Peritoneal wall biopsies were taken from which *Mycobacterium* was isolated confirming peritoneal tuberculosis. He was started on rifampicin, isoniazid, pyrazinamide and ethambutol and completed a 6-month course without further complications.

BACKGROUND

Surgeons should be aware of the entity of peritoneal tuberculosis as a differential for abdominal symptoms and be able to recognise peritoneal tuberculosis on laparoscopy.

CASE PRESENTATION

A 37-year-old male healthcare worker presented to the medical assessment unit with a 3-month history of lethargy, weight loss, night sweats and intermittent abdominal discomfort. On examination there was some dullness to percussion at the right lung base and decreased breath sounds. He had mild generalised tenderness in his abdomen with no organomegaly or palpable masses. Full blood count, liver and renal function tests were normal. Chest x-ray and CT of the thorax showed small bilateral pleural effusions with no other abnormality. CT of the abdomen and pelvis however, showed ascites with extensive thickening of the peritoneum and marked induration of the mesentery and omentum (figure 1). Mantoux test was positive. Laparoscopy was undertaken to outrule intra-abdominal malignancy and confirm the diagnosis of tuberculosis (figure 2). Peritoneal wall biopsies were taken from which mycobacterium was isolated confirming peritoneal tuberculosis. He was started on rifampicin, isoniazid, pyrazinamide and ethambutol and completed a 6-month course without further complications.

DISCUSSION

Peritoneal tuberculosis accounts for 3–4% of all presentations of tuberculosis.¹ Clinical presentation

Figure 1 An abdominal CT axial slice demonstrating induration of the mesentery (large horizontal arrow), thickened peritoneum (small horizontal arrow) and ascitic fluid (vertical arrow).

is extremely varied and presents a diagnostic challenge. Up to 88% of patients present with abdominal pain.² Distension, weight loss, diarrhoea and nausea and vomiting are other common presenting complaints. Mantoux tests and ascitic tap have been shown to cause significant delay in diagnosis as a negative Mantoux test does not exclude a diagnosis of tuberculosis and ascitic tap for acid-fast bacilli is diagnostic in <3% of cases and can take between 4 and 8 weeks for organism culture.³ CT is a useful tool in recognising intra-abdominal lymphadenopathy, caseating necrosis and peritoneal and mesenteric thickening although it does not outrule malignancy.⁴ Studies have reported laparoscopy as the ideal method for early diagnosis of peritoneal tuberculosis with a correct diagnosis in up to 95% of patients. Typical appearance includes peritoneal inflammation, tubercular deposits coating peritoneum, omentum, liver and spleen,

Figure 2 A laparoscopic image demonstrating the appearances of peritoneal tuberculosis.

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adhesions and ascitic fluid.⁵ Peritoneal and omental biopsies can then be used for culture of *Mycobacterium*. With the recent resurgence in the incidence of abdominal tuberculosis and increasing severity of the disease associated with HIV, it is important to be able to recognise the radiological and laparoscopic appearances of this increasingly common disease.

Learning points

- ▶ Peritoneal tuberculosis should be considered in the differential for abdominal symptoms.
- ▶ Diagnostic laparoscopy is the ideal modality for early diagnosis.
- ▶ Surgeons should be able to recognise laparoscopic findings of peritoneal tuberculosis.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Na-Changmai W, Pojchamarnwiputh S, Lertprasertsuke T, *et al*. CT findings of tuberculous peritonitis. *Singapore Med J* 2008;49:488–91.
- 2 Underwood MJ, Thompson MM, Sayers RD, *et al*. Presentation of abdominal tuberculosis to general surgeons. *Br J Surg* 1992;79:1077–9.
- 3 Marshall JB. Tuberculosis of the gastrointestinal tract and peritoneum. *Am J Gastroenterol* 1993;88:989–99.
- 4 Denton T, Hossain J. A radiological study of abdominal tuberculosis in a Saudi population, with special reference to ultrasound and computed tomography. *Clin Radiol* 1993;47:409–14.
- 5 Rasheed S, Zinicola R, Watson D, *et al*. Intra-abdominal and gastro-intestinal tuberculosis. *Colorectal Dis* 2007;9:773–83.

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