Peritoneal carcinomatosis: the importance of laparoscopy

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Accepted 17 September 2021

DESCRIPTION

A 64-year-old woman presented with diffuse abdominal pain, postprandial bloating and 5 kg of unintentional weight loss in the last 3 months. She had a previous medical history of nephrectomy due to recurrent pyelonephritis and hypothyroidism. Physical examination revealed only mild tenderness in the umbilical area. Relevant laboratory values included a normocytic normochromic anaemia (11.7 g/dL) and positive CA-125 (100.9 U/mL). CT presented areas of irregular soft tissue thickening of the peritoneum, multiple peritoneal nodules and mild ascites; uterus and adnexa had no abnormalities. Transvaginal ultrasound confirmed a homogeneous and normal-sized uterus and morphologic large ovaries, without expansive lesions. Positron emission tomography confirmed diffuse heterogeneous peritoneal ¹⁸F-FDG uptake, consistent with carcinomatosis, and enlarged lymph nodes with ¹⁸F-FDG uptake in the supraclavicular, hilar, oesophageal, paratracheal, preaortic and external iliac lymph nodes. Peritoneal fluid revealed 56% of lymphocytes and high activity of ascitic fluid adenosine deaminase (ADA) (63 UI/L). Interferon gamma release assay (IGRA) to detect *Mycobacterium tuberculosis* infection was positive (>10 UI/mL). The remaining examinations performed—upper gastrointestinal endoscopy, colonoscopy, breast ultrasound, mammography—were normal.

Exploratory laparoscopy unmasked a peritoneum with a strawberry appearance (figure 1), with multiple white nodules/granulomas. The histopathological examination of parietal peritoneum biopsies and round ligament samples revealed a necrotising granulomatous inflammation involving the peritoneum (granulomatous peritonitis), suggestive of *Mycobacterium*, with no evidence of neoplasia. Ziehl-Neelsen test for acid-fast bacilli was negative; cultures were not performed.

Figure 1 Laparoscopy image of peritoneal tuberculosis, revealing a peritoneum with a strawberry appearance, with multiple white nodules/granulomas on its surface.

Learning points

- ▶ Abdominal tuberculosis should be considered in patients who present non-specific abdominal reports, peritoneal thickening of unknown origin in the abdominal CT and increased CA-125 levels.
- ▶ Laparoscopy is reported as the ideal method for early diagnosis because of the magnified observation of the peritoneal surfaces.

After exclusion of malignancy, the diagnosis of peritoneal tuberculosis was made and antituberculosis agents were initiated (ethambutol, rifampicin, isoniazid and pyrazinamide) and maintained for 9 months, with complete resolution of the radiological alterations. There were no signs of relapse after 2 years of follow-up.

Peritoneal tuberculosis involves the parietal and visceral peritoneum and intestinal mesentery; it can be provoked by a reactivation of a latent tuberculous infection of the peritoneum, rupture of caseous abdominal lymph nodes or haematogenous spread of the infection.^{1,2} This disease is often difficult to distinguish from peritoneal carcinomatosis due to its non-specific symptoms and similar radiological presentation.³ Peritoneal tuberculosis should be considered in any patient presenting with ascites, peritoneal thickening and increased levels of CA-125.⁴ Laparoscopy is reported as the ideal method for early diagnosis because it allows a magnified observation of the peritoneal surfaces; any surgeon should be aware of the typical laparoscopic findings enabling an early diagnosis.^{5,6} The histological confirmation of the granulomatous involvement and high activity of ADA are also extremely useful for the diagnosis since a negative culture cannot exclude tuberculosis.^{5,7}

Contributors AAO conducted the research, collected the data, designed the paper and wrote the article. JM collected the data and revised the final paper. OP collected the data and reviewed the final paper. ILM performed the laparoscopy, collected data and reviewed the final paper.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Consent obtained directly from patient(s)

Provenance and peer review Not commissioned; externally peer reviewed.

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To cite: Oliveira AA, Morais J, Pires O, et al. *BMJ Case Rep* 2021;**14**:e243972. doi:10.1136/bcr-2021-243972

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