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Rare image during laparoscopy: Abdominal tuberculosis

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Dear Editor,

A 66-year-old female patient was admitted to a general surgery polyclinic with abdominal pain. She was treated for pulmonary tuberculosis (PT) 28 years ago. On performing a physical examination, right upper quadrant tenderness was detected. Laboratory parameters were unremarkable. Abdominal ultrasonography (USG) findings were compatible with cholelithiasis and wall thickening of a hepatic flexure. Colonoscopy was planned with a suspicion of colon malignancy as wall thickening of the hepatic flexure, omental implants, and ascites were confirmed on performing contrast-enhanced abdominal computed tomography (CT) (Figure 1). Colonoscopy revealed stenosis and ulceration in the hepatic flexure. Ulcer biopsy results were compatible with granulomatous colitis. Gastroscopy was insignificant. Laparoscopic cholecystectomy and implant biopsy were planned to be performed. During an intraoperative examination, multiple implants were seen on serosal surfaces (Figure 2). No findings associated with malignancy were found. Laparoscopic cholecystectomy and implant biopsy were performed. The postoperative course was uneventful. The patient was discharged on post-operative day 2. She was referred to a chest diseases clinic. A pathological examination revealed chronic cholecystitis and granulomatous peritonitis. Ziehl-Neelsen staining of the implant biopsy sample confirmed a final diagnosis of abdominal tuberculosis (AT). The patient completed six months of follow-up with no complications. Her treatment for AT is ongoing.

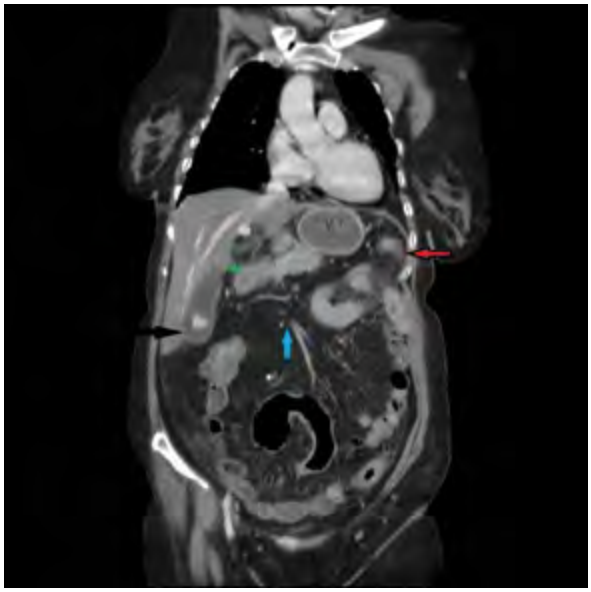

Figure 1. The bile stone (black arrow), perisplenic free fluid (red arrow), multiple omental implants (blue arrow), and thickened colon wall (star) in the coronal sections obtained on performing contrast-enhanced abdominal computed tomography.

Although the incidence of tuberculosis is high in underdeveloped countries, its incidence in developed countries has increased in recent years due to human immunodeficiency virus-related immunodeficiency and an increase in the number of immigrants from underdeveloped countries (1). AT is the sixth most common cause of extra-PT (2). AT constitutes 4.9% of whole tuberculosis cases and is associated with PT in 5-36% of cases (3). The most common findings are abdominal pain, ascites, and weight loss (1). Making a diagnosis is very difficult when AT is not concomitant with PT. The rate of AT patients treated for PT in the past has been reported as 19.2% (1). In our case, the patient was treated for PT 28 years ago.

Abdominal tuberculosis may mimic intraabdominal pathologies such as Crohn's disease, colorectal cancer, sarcomas, or periappendiceal abscesses. The possibility that AT mimics Crohn's disease may result in a delayed diagnosis (3). The most commonly affected bowel segment is the terminal ileum in both AT and Crohn's disease (1). In the present case, AT was localized in the hepatic flexure and serosal surfaces and was found to have a similar appearance to Crohn's disease in colonoscopy results, while having a similar appearance to peritoneal metastasis of malignant tumors in laparoscopy results.

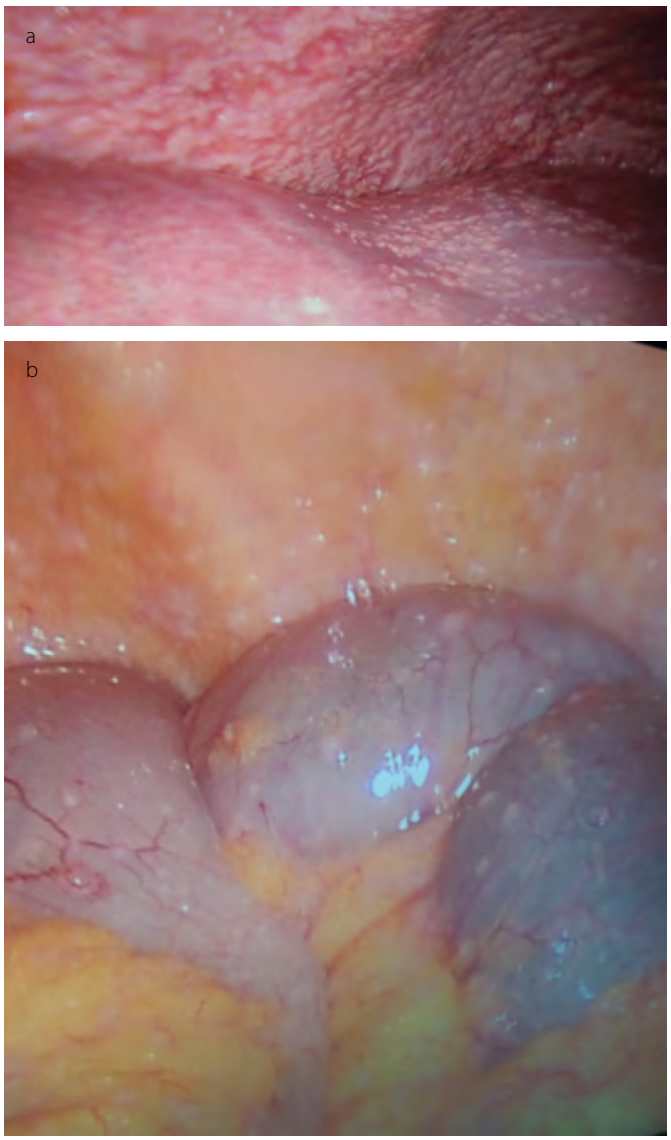

Figure 2. a, b. (a) Multiple tuberculous foci in the right lobe of the liver and right subdiaphragmatic surface, (b) tuberculous foci on the small intestine and mesentery, similar to those observed in peritoneal carcinomatosis

Although abdominal USG and contrast-enhanced CT are highly sensitive to AT, imaging methods provide limited information in diagnosis due to the absence of pathognomonic radiological signs (4,5). The availability of common findings of AT such as ascites, abdominal mass, and omental involvement in other intra-abdominal pathologies including malignant tumors, lymphomas, and peritonitis limits the efficiency of radiological imaging in making a diagnosis (5). Tissue biopsy is recommended for making a definitive diagnosis. Polymerase chain reaction tests for *Mycobacterium tuberculosis* establish a rapid diagnosis. In the presence of clinically suspected AT, either radiologically or histologically, treatment initiation is recommended without waiting for culture results, which take a long time (4).

Biopsy and culture should be performed for making a diagnosis in the presence of clinical or radiological evidence of AT. In patients with multiple serosal implants without evidence of malignancy on performing laparoscopy or laparotomy, the possibility of AT should be kept in mind.

Informed Consent: Written informed consent was obtained from the patient who participated in this study.

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