A Case of Abdominal Tuberculosis Mimicking a Gynaecological Malignancy

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Background

Abdominal tuberculosis (TB) is the most common form of extrapulmonary TB, accounting for 5% of all cases[1]. It can occur due to ingestion of *Mycobacterium tuberculosis*, reactivation of latent TB, haematogenous or lymphatic spread[1]. It can involve the lymph nodes, bowel, solid organs and peritoneum, and is often mistaken for disseminated gastrointestinal, ovarian or primary peritoneal malignancies[1].

Case Presentation and Investigations

A 31 year old female presented to the emergency department with a three day history of abdominal pain and fevers. She was seven months postpartum (Caesarean section) which was uncomplicated with reportedly normal adnexae, and was breastfeeding. Her inflammatory markers were elevated, and pelvic US showed a 38mm right ovarian cyst with large volume ascites and omental thickening. A CT abdomen pelvis revealed omental caking with peritoneal enhancement. The right ovarian lesion remained indeterminate between a dermoid and primary ovarian malignancy. There were also densely calcified portocaval and mesenteric lymph nodes.
Her CA 125 was 582, with otherwise normal tumour markers. She had no family history of ovarian or breast cancer, and had migrated from India 18 months prior, with a negative TB screen.

Management

The patient was admitted under the gynaecology oncology team for further assessment and management. She underwent a diagnostic laparoscopy and peritoneal biopsies. There was 200mL ascites sent for cytology and culture, as well as extensive miliary disease seen on all peritoneal surfaces and bowel, with both large and small bowel adherent to anterior abdominal wall. The right ovary also had small volume disease, and the left ovary was unable to be visualised due to sigmoid adhesions.
The biopsies and ascites did not show any evidence of malignancy, and eventually cultured *Mycobacterium tuberculosis*. She was referred to infectious diseases and commenced on nine months of isoniazid, rifampicin and vitamin B6, which she has completed. There has been no evidence of new or recurrent disease.

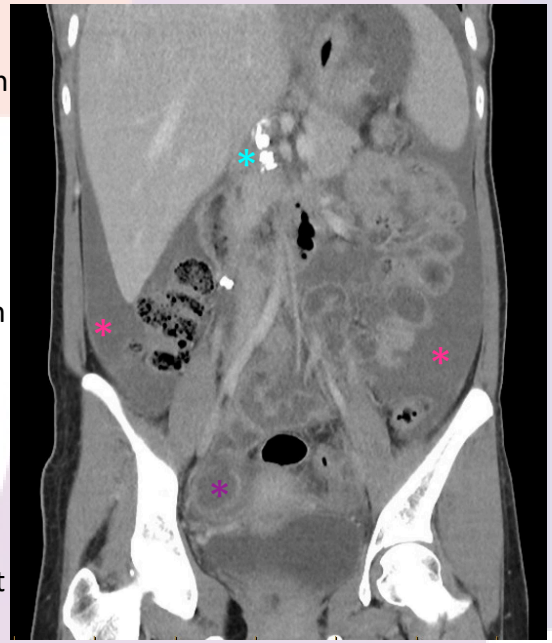

Figure 1: CT abdomen pelvis showing right ovarian cyst (*), extensive free fluid (*) and calcified portocaval lymph nodes (*)

Discussion

This case demonstrates the ability of TB to be the great mimicker, and the importance of considering it in the differential diagnosis. It has been shown to be associated with elevated tumour markers[1,2]. TB can also share similar characteristics with bowel and ovarian cancers on imaging, and even be avid on PET scan[1,2,3]. The presence of the right ovarian cyst contributed to the initial impression of an ovarian malignancy. However, the cyst had no malignant features and had resolved on follow up imaging.
This case also highlights the management of TB while breastfeeding. Generally, continuation of breastfeeding is encouraged, and the low level excretion of rifampicin and isoniazid has no consequence.[4]

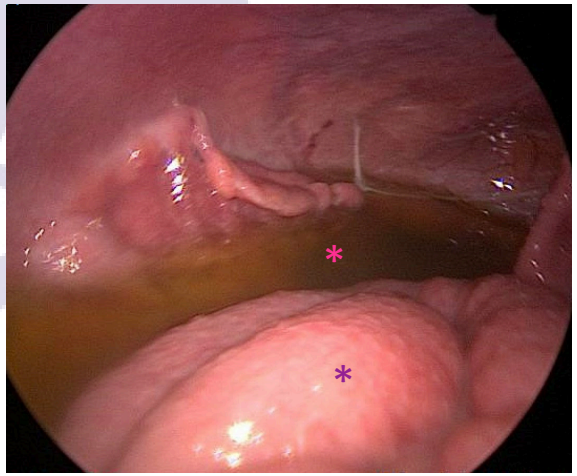

Figure 2a: Intraoperative picture from diagnostic laparoscopy showing extensive ascites (*) and miliary small bowel disease (*).

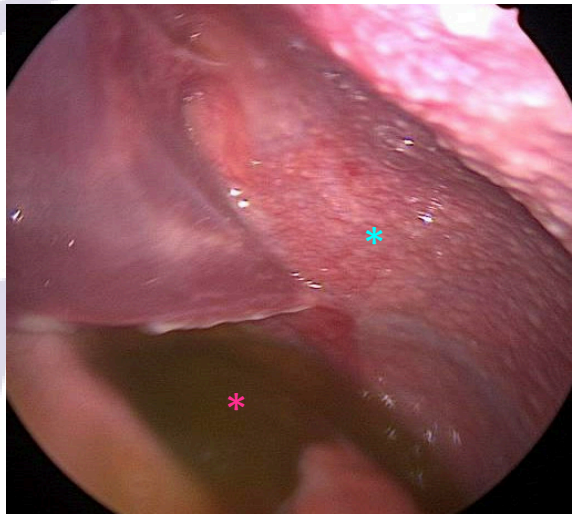

Figure 2b: Intraoperative picture from diagnostic laparoscopy showing extensive ascites (*) and peritoneal miliary disease(*).

References
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