

An Atypical Etiology of Chronic Abdominal Pain: Peritoneal Tuberculosis

Hannah Zuercher BS¹, Bilal Koussayer BS¹, Lucy Guerra, MD, MPH, FACP, FHM²

¹Morsani College of Medicine, University of South Florida, Tampa, FL

²Department of Internal Medicine, University of South Florida, Tampa, FL

Introduction

Peritoneal tuberculosis (TB) is a rare presentation of extra-pulmonary TB, comprising only 5% of extra-pulmonary TB cases.¹ Patients oftentimes present with non-specific complaints and without typical *Mycobacterium tuberculosis* risk factors.² Additionally, diagnostic testing lacks high sensitivity and specificity with further invasive methods frequently necessitated.¹ We present an unusual case of peritoneal TB presenting as non-localized abdominal pain, facilitating insight into this uncommon disease.

Case Presentation

- 53-year-old female with a PMH of hypothyroidism and history of travel to Mexico
- Presented with joint pain diagnosed as seronegative rheumatoid arthritis
- Began treatment with methotrexate and adalimumab for one year
- Within the following year, she experienced chronic RLQ abdominal pain, fevers, night sweats, fatigue, and ascites
- Extensive work-up revealed a positive QuantiFERON gold TB test
- Diagnostic laparoscopy with peritoneal biopsy demonstrated elevated CA-125 and large-volume ascites (Figures 1-3)
- Negative *Mycobacterium tuberculosis* PCR and Grocott methenamine silver staining
- One of two acid-fast bacillus (AFB) smear and cultures yielded a positive result

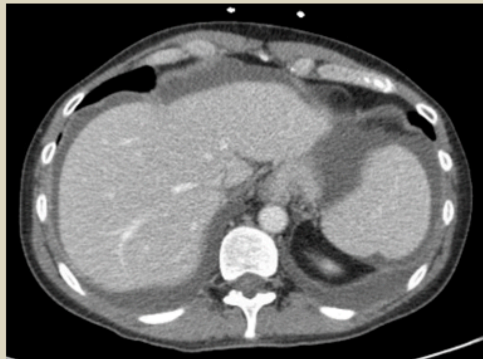


Figure 1. Moderate volume abdominal ascites with peritoneal thickening.



Figure 2. Pelvic adhesions with friable tissue and peritoneal implants.

Figure 3. Ascites present in the peritoneum.

Outcome

- Peritoneal TB treatment (RIPE therapy)
- Years of chronic RLQ pain starting several months post-RIPE treatment completion
- Cholecystectomy and three adhesion lysis procedures with mild symptomatic improvement and subsequent worsening thereafter
- Large number of adhesions noted intraoperatively from the liver to the diaphragm and anterior abdominal wall, appearing similar to Fitz-Hugh-Curtis syndrome
- Patient continues to have chronic RLQ pain and is followed closely by her treatment team

Discussion

- Abdominal TB can include any part of the gastrointestinal tract²
- Typically secondary to hematogenous spread from pulmonary TB, although other routes include direct ingestion or spread from nearby infected structures²
- Risk factors: immunosuppressive medication usage, history of travel to Mexico (high TB burden)³
- AFB smear and culture has a poor sensitivity for peritoneal TB, oftentimes necessitating laparoscopic peritoneal biopsy for further diagnosis¹
- Our patient was empirically treated for peritoneal TB before AFB culture yielded positive results, given her B symptoms and positive QuantiFERON test
- She also had an elevated CA-125 value, which is associated with peritoneal TB and may be used in patients with a negative AFB stain¹
- Our patient experienced recurrent adhesions, an unfortunate and persistent consequence of the inflammatory nature of peritoneal TB

References

1. Fortún, J., Martín-Dávila, P., Méndez, R., Martínez, A., Norman, F., Rubi, J., Pallares, E., Gómez-Mampaso, E., & Moreno, S. (2009). Ca-125: a useful marker to distinguish pulmonary tuberculosis from other pulmonary infections. *The open respiratory medicine journal*, 3, 123–127. <https://doi.org/10.2174/1874306400903010123>
2. Debi U, Ravisankar V, Prasad KK, Sinha SK, Sharma AK. Abdominal tuberculosis of the gastrointestinal tract: revisited. *World J Gastroenterol*. 2014 Oct 28;20(40):14831-40. doi: 10.3748/wjg.v20.i40.14831. PMID: 25356043; PMCID: PMC4209546.
3. High Burden TB Country List 2021. Virginia Department of Health. (n.d.). Retrieved October 6, 2022, from <https://www.vdh.virginia.gov/content/uploads/sites/175/2021/04/High-Burden-TB-Countries-2021.pdf>

Key Takeaways:

- Peritoneal TB can present with B symptoms, abdominal pain, and ascites, lasting for weeks to months
- Given the poor sensitivity for peritoneal TB, AFB smear/culture is oftentimes not the most effective test for peritoneal TB
- Adhesions may occur as a result of laparoscopy interventions and/or the inflammatory nature of TB



USF Health
UNIVERSITY of SOUTH FLORIDA