Acute Alcoholic Hepatitis with Portal Hypertension Complicated by Tuberculous Peritonitis and Ascites

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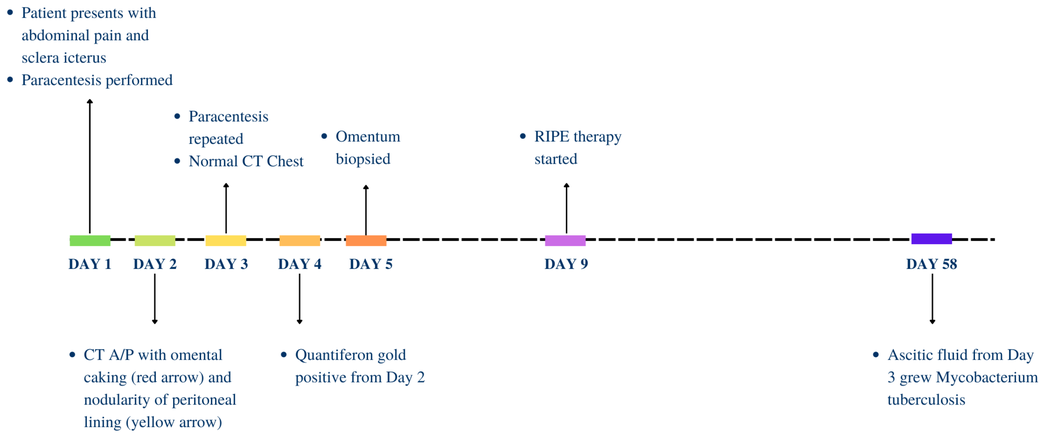
Introduction

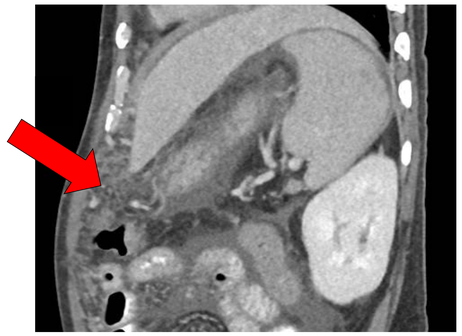
- Peritonitis related to tuberculosis (TB) infection is rare in the United States.[a]
- We present a patient found to have TB peritonitis during evaluation of alcoholic hepatitis without evident lung disease.

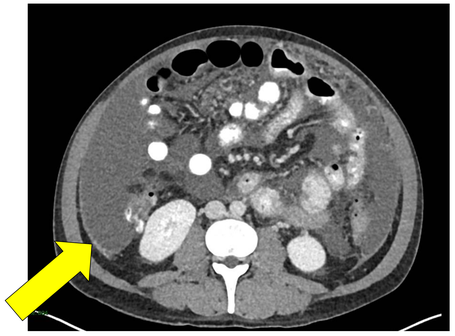
Case Presentation

- The patient is a 39 year old male born in Mexico with no past medical history who presented with three days of abdominal distention, jaundice, and fevers in the setting of alcohol use disorder. He had no other historic risk factors for TB or cough.
- Physical exam was remarkable for a distended abdomen.
- Laboratory results showed leukocytosis, total bilirubin 3.5 (mg/dL), alkaline phosphatase 295 (U/L), AST 147 (U/L), ALT 62 (U/L).
- Ascitic fluid studies were significant for a high white blood cell count (2214/uL) with lymphocytic predominance (91%). The serum ascites albumin gradient was consistent with portal hypertension, and ascites total protein was elevated (3.6g/dL).
- Cross sectional imaging of the abdomen showed omental caking, peritoneal lining nodularity, and hepatosplenomegaly.
- Fine need aspiration of the peritoneum showed necrotizing and non-necrotizing granulomas.
- The patient was started on rifampin, isoniazid, pyrazinamide and ethambutol for TB and abstained from further alcohol use.
- Ascitic fluid ultimately grew TB.
- Three months after discharge, jaundice and ascites had resolved and his liver tests had significantly improved.

Case Timeline







Discussion

- TB peritonitis makes up 4-10% of all extrapulmonary TB infections.[a]
- Though rare in the US, it has a high mortality rate (50-60%). Diagnosis can be complicated by difficulty isolating the organism and culture results can take weeks.[a]
- Diagnosis can be supported by ascites fluid studies with elevated lymphocyte count, total protein, and positive ADA; although for more definitive diagnosis peritoneal biopsy should be considered.
- An index of suspicion for TB infection, based on his foreign birth, along with his abnormal ascites fluid studies, led to the peritoneal biopsy and ultimate culture diagnosis of his infection that might otherwise have been overlooked.

References

a. Sieloff EM, Ladzinski AT, Lima N, Vos D, Boamah H, Melgar TA. Hospitalizations for tuberculous peritonitis in the United States: Results from the National Inpatient Sample database from 2002 to 2014. Int J Mycobacteriol 2020;9:167-72.