

Tuberculous peritonitis

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Intra-abdominal tuberculosis (TB) is common in resource-poor countries; however, the incidence is rising in resource-rich countries as a consequence of migration and immunosuppression. *Mycobacterium avium intracellulare* is becoming increasingly prevalent with the widespread increase in human immunodeficiency virus (HIV) co-infection. The abdomen is involved in approximately 11% of patients with extrapulmonary TB and includes intraperitoneal, gastrointestinal tract and solid organ disease forms. TB peritonitis requires specific mention because it is often diagnosed late, resulting in undue patient morbidity and mortality. TB can spread to the peritoneum through the gastrointestinal tract (typically the ileocaecal region) via mesenteric lymph nodes or directly from the blood, usually from the 'miliary' (Figure 65.8a) but occasionally from the 'cavitating' form of pulmonary TB, lymph and the Fallopian tubes; 50–80% of patients with abdominal TB can be expected to have peritoneal involvement. The most common form of TB peritonitis is the wet, ascitic type disease (90%), which is characterised by generalised or loculated ascites. Multiple tubercle deposits are present on both layers of the peritoneum. In the less common form fibrotic fixed loops of bowel and omentum are matted together and may present with subacute intestinal obstruction. Ascites is not with abdominal pain, weight loss and abdominal distension. Distinction from diffuse peritoneal metastases is difficult and may require biopsy. Diagnosis is via abdominal ultrasonography or CT to detect ascites and lymphadenopathy with/without diffuse thickening of the peritoneum, mesentery and/or omentum (Figure 65.8b,c). Ascitic fluid is typically a straw-coloured exudate (protein >25–30 g/L) with white cells >500/mL - and lymphocytes >40%. Unfortunately, diagnostic smears for acid-fast bacilli are often not diagnostic and culture may take up to 4–8 weeks. Laparoscopy and peritoneal biopsy may thus be helpful to couple typical appearances with histology. The value of new laboratory investigations such as ¹⁸F-MTB/RIF assay and the interferon-gamma the Xpert release assay in diagnosing extrapulmonary TB remains to be determined; however, measurement of adenosine deaminase activity in ascitic fluid has a high sensitivity and specificity in diagnosing peritoneal TB. TB management is principally supportive (nutrition and hydration) and medical (systemic anti-TB therapy, noting that multidrug resistance may be higher for abdominal than for pulmonary TB), although surgery may be required for specific complications such as intestinal obstruction.

Summary box 65.6 Tuberculous peritonitis

Acute (may be clinically indistinguishable from acute bacterial peritonitis) and chronic forms
Abdominal pain, sweats, malaise and weight loss are frequent
Ascites common, may be loculated
Caseating peritoneal nodules are common – distinguish from metastatic carcinoma and fat necrosis
of pancreatitis
Intestinal obstruction may respond to anti-TB treatment without surgery

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