

## Biliary fistula in AIDS-related abdominal tuberculosis

**To the Editor:** Tuberculosis (TB) is often the first manifestation of AIDS. Extrapulmonary disease can occur in up to 40% of these patients, particularly when immunosuppression is advanced. Abdominal TB can mimic common non-infectious abdominal syndromes. Several cases of digestive fistulas attributed to AIDS-associated TB have been described, most of them being oesophageal fistulas from mediastinal lymph nodes. More distal intestinal fistulas are extremely rare.<sup>1,3</sup> We report what is probably the first case in which a biliary fistula was the first presentation of abdominal TB and AIDS.

A 34-year-old man from Nigeria was admitted to the Department of Surgical and Gastroenterological Sciences at the University of Padova in June 2008 with abdominal pain and fever. He had complained of vague abdominal pain for 4 months and had no history of liver disease or surgery. Three weeks previously, an upper gastro-intestinal (GI) endoscopy had showed a bulbar ulcer (*Helicobacter pylori*-negative) that had been treated with standard proton pump inhibitor therapy.

On physical examination, he appeared dehydrated with a diffusely painful abdomen. Blood tests showed moderately increased gamma-glutamyltranspeptidase, glutamic pyruvic transaminase and glutamic oxalacetic transaminase levels. A plain abdominal radiograph revealed pneumobilia, confirmed by a computed tomography scan that also showed abdominal lymph node enlargement. A second upper GI endoscopy demonstrated an orifice with bile effusion in the upper duodenal knee. Findings at laparotomy included a distended and oedematous gallbladder, a small amount of free fluid in the sub-hepatic region, and many enlarged, 'cheesy' lymph nodes with multiple abscesses in the hepatic pedicle, around the coeliac axis and in the mesentery of the terminal ileum. Intra-operative cholangiography revealed severe stenosis of the choledocus caused by compression resulting from the nodal enlargement. Cautious dissection across the inflammatory mass revealed a fistula between the posterior side of the duodenum and the choledocus. Frozen sections from the choledocus and the duodenal 'ulcer' were negative for neoplastic disease and showed the presence of granulomatous disease. The duodenal 'ulcer' was excised along its margins and simply sutured after limited mobilisation of the duodenum. The choledocus was transected and distally ligated, and a hepatico-jejunal anastomosis on a Roux-en-Y loop was performed. Histological examination of the surgical specimens confirmed the presence of granulomatous disease.

Tests for HIV (serum antibodies against HIV-1 and HIV-2 serotypes) and TB (Quantiferon) were positive. Sputum culture was positive for *Mycobacterium tuberculosis*, but the polymerase chain reaction and microscopic examination were negative. Reverse transcription polymerase chain reaction for HIV RNA showed a viral serum concentration of 1.417.751 copies/ml, and the CD4/CD8 ratio was 0.1%. A diagnosis of overt AIDS was therefore made. Anti-TB therapy was started, and after 8 weeks antiretroviral ther-

apy was also commenced. After 6 months' follow-up, the patient was well, with antiretroviral and anti-TB therapy continuing.

Abdominal TB usually presents as chronic or sub-acute peritonitis with generalised or loculate ascites and intestinal involvement. Abdominal digestive fistulas caused by *M. tuberculosis* infection are rare, and only 3 other cases of TB-related biliary-enteric fistulas have been described in the literature. All were in patients with a well-established diagnosis of longstanding HIV infection. The fistulas were diagnosed endoscopically and successfully treated with anti-TB drugs without surgical intervention in 2 cases.<sup>1,2</sup> The third case was diagnosed by means of a CT scan, and cholecystectomy was performed.<sup>3</sup> In our patient, the close proximity of the choledocus and duodenum to massively cheesy lymph nodes left us in no doubt about the tuberculous origin of the fistula. Histological examination confirmed the tubercular origin of the lymph node enlargement, with no gallbladder stones or other disease that could give an alternative explanation for the fistula.

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1. Desta TT, Man KM, Bouvier D, Leung JW. Choledcho-enteric fistula due to *Mycobacterium tuberculosis* in a patient with acquired immunodeficiency syndrome. *Gastrointest Endosc* 1998;48(6):623-626.
2. Colovic R, Grubor N, Jescic R, et al. Tuberculous lymphadenitis as a cause of obstructive jaundice: A case report and literature review. *World J Gastroenterol* 2008;14(19):3098-3100.
3. Paupard T, Etienney I, Patey O, et al. Diagnostic endoscopique d'une fistule bilio-digestive d'origine tuberculeuse revelatrice d'un syndrome d'immunodeficiency acquise. *Gastroenterol Clin Biol* 1995;19:1055-1058.