Obstructive Jaundice—An Unusual Complication of Duodenal Tuberculosis: Treatment with Transhepatic Balloon Dilatation

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Abstract
This is a report of a patient on treatment for duodenal tuberculosis, who developed obstructive jaundice due to a benign stricture of the terminal common bile duct. This complication of duodenal tuberculosis, to our knowledge, has not been reported before. Percutaneous transhepatic balloon dilatation of the stricture alleviated the jaundice.

Key words: Common bile duct stricture.

Introduction
In the small bowel, the duodenum is the part least frequently affected by tuberculosis. Gastric outlet obstruction is the most frequent complication of duodenal tuberculosis. Obstructive jaundice as a sequel of duodenal tuberculosis has never been reported before.

Case Report
A 35-year-old female patient presented with a one-month history of vomiting. There was history of weight loss with occasional evening rise of temperature. Physical examination was unremarkable. Laboratory findings were non-contributory. The chest radiograph was normal. Upper gastrointestinal endoscopy showed ulceration along the second part of the duodenum. Endoscopic biopsies revealed nonspecific inflammatory changes. An upper gastrointestinal series with barium revealed non-distendibility and ulceration in the descending duodenum (Fig 1). A high-grade stricture was seen at the junction of the third and fourth portions.

At laparotomy, a large mass of lymph nodes was seen occupying the 'C' loop of the duodenum. A light stricture of the distal duodenum was also present. A proximal duoden-jejunostomy was performed. A biopsy of the lymph node mass revealed tuberculosis. The patient was started on anti-tuberculous treatment and made an uneventful post-operative recovery.

She presented again nine months later with a two-weeks’ history of increasing jaundice. Liver function tests suggested an obstructive lesion as a cause for the jaundice. Radiological studies showed the obstruction to be at the lower end of the common bile duct (CBD). No lymph node mass was evident in the region of the duodenum on CT scans. An attempted ERCP failed as the papillae could not be identified. Guided by the transhepatic cholangiogram, which showed a localized benign stricture in the terminal CBD, a transhepatic balloon dilatation of the stricture was performed (Fig 2). The patient’s jaundice regressed steadily following the dilatation. One year following the procedure, the patient is asymptomatic.

Discussion
Tuberculosis can affect the duodenum essentially by two ways: intrinsic involvement by ulceration and stricture formation or extrinsic compression by enlarged tuberculous lymph nodes. While both of these commonly present with symptoms of gastric outlet obstruction, the obstructive variety may mimic symptoms of peptic ulcer disease.

Obstructive jaundice as a complication of duodenal tuberculosis has never been reported. However, compression of the CBD leading to jaundice has been seen with enlarged tuberculous lymph nodes at the porta hepatis and in the peripancreatic region. In neither of these reported cases was the duodenum involved by tuberculosis.

In our patient, though intrinsic duodenal involvement and adjacent lymph nodal enlargement were present, jaundice developed only during the healing phase of the disease. At this time, radiological studies ruled out...
extrinsic mass effect of any form as the cause of CBD obstruction. The localised benign nature of the stricture and its location in the terminal CBD lead us to believe that fibrosis as a part of healing of duodenal tuberculosis was responsible for the development of jaundice. This lesion responded dramatically to balloon dilatation.

Though rare, we wish to stress that obstructive jaundice developing in a patient on treatment for duodenal tuberculosis could be due to a benign stricture in the terminal CBD. Balloon dilatation of such strictures is likely to be helpful in alleviating the jaundice.

References