Abdominal Tuberculosis Mimicking Annular Pancreas in an Adult

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Abstract

Gastrointestinal tuberculosis is rampant in Africa and can mimic other gastrointestinal diseases. Isolated duodenal involvement is rare. We report a patient who succumbed to an isolated mid duodenal tuberculosis whose clinical presentation, endoscopy and computerised tomography scans resembled annular pancreas, only to be diagnosed at laparotomy. The limitations of clinical evaluation, endoscopy and radiology are highlighted as the importance of diagnostic laparoscopy is emphasized.

Key words: Annular pancreas, Tuberculosis, Duodenal.

Introduction

Tuberculosis (TB) is a major health concern worldwide, to an endemic level in tropical countries. It primarily affects the pulmonary system. When involved, gastrointestinal (GI) tuberculosis is often secondary localizing at the ileocaecal region[1]. Secondary duodenal tuberculosis is rare, with an incidence of 0.5 – 2.5% [2]. Primary duodenal tuberculosis with duodenal obstruction is even rarer and can mimic the more common causes of duodenal obstruction [3, 4]. Herein we report a patient with an isolated mid duodenal tuberculosis whose presentation, endoscopy and radiology results mimicked a symptomatic annular pancreas. The pitfalls of clinical evaluation, radiology and endoscopy in diagnosis are illustrated.

Case Report

A 25 year old male patient with complains of dyspepsia for 5 years presented at our hospital. He had severely been unsuccessfully treated for peptic ulcer disease. Symptoms worsened in the last four months with severe epigastric pains, abdominal distension, vomiting, constipation and anorexia. He was emaciated with mild epigastric deep tenderness, without any palpable mass or jaundice. A barium meal was normal while esophagogastroduodenoscopy (OGD) showed extrinsic obstruction of the second part of the duodenum. The oesophageal, gastric and duodenal mucosa was normal. An abdominal Computerized Tomography (CT) scan showed a ring of pancreatic tissue that encircles the second part of the duodenum (Figure 1). At laparotomy matted lymph nodes on the head of the pancreas with fibrosis and nodules extending across the second part of the duodenum were found. The nodules were biopsied and separated. The rest of the pancreas was normal; there was no other noted pathology in the abdominal cavity. The biopsy showed tuberculous granuloma without pancreatic tissue. He succumbed to death two days post operatively.

Discussion

With the advent of HIV/AIDS, TB has become a resurgent problem worldwide [5]. The clinical manifestations of gastroduodenal TB are varied and often non-specific, mimicking the more common abdominal conditions and therefore difficult to diagnose [3, 4]. Our patient had features of intestinal obstruction. Pain and vomiting are also symptoms of duodenal TB, fever and weight loss may occur as in our case and some patients may present with upper GI bleeding[6]. In addition, a third of the patients present with a palpable epigastric mass [7]. The presence of pulmonary TB alongside the above symptoms could guide the clinician make a diagnosis. However, the absence of pulmonary TB, like in our patient, complicates this diagnosis. The radiological cues and endoscopy are often non-diagnostic as seen in our case [8]. Barium contrast studies did not show any mucosal irregularity or displaced loops while the abdominal CT scan showed an extrinsic ring lesion suggestive of annular pancreas which in turn on exploration turned out to be duodenal TB with fibrosis. Studies have suggested that dilated bowel loops, strictures, deformed and pulled-up caecum, ulceration of ileum, bowel wall thickening, and extrinsic compression by lymph nodes on barium studies are pathognomic of intestinal TB [9]. These features can often be missed in isolated duodenal TB[8]. Abdominal CT scan and ultrasound are non-specific for intestinal TB. However, features of abdominal tuberculosis on CT scan are high density ascites, lymphadenopathy, bowel wall thickening, and irregular soft tissue densities in the omental area [10,
While laparotomy in this case was supposed to be therapeutic, it ended up being diagnostic. Nonetheless, laparotomy with biopsy or more preferably laparoscopy with biopsy is often needed to diagnose the disease [12]. Apart from obstruction, the other complications of duodenal TB are gastrointestinal (GI) bleed, perforation and fistula formation with other parts of GI tract and even the kidney and aorta and obstructive jaundice [12]. Considering the divergent diagnosis in our patient, annular pancreas in adults is very rare and is often only detected after developing complications[13]. Fibrosed duodenal TB obstructing the second part of the duodenum can therefore mimic an annular pancreas on clinical evaluation, endoscopy and abdominal CT scan.

In conclusion, it is important that the clinicians be wary of abdominal tuberculosis which can mimic annular pancreas and other common obstructing conditions. Endoscopy and radiology may not benefit the clinician in diagnosing duodenal tuberculosis.

References

Illustrations

Illustration 1

Figure 1: A CT scan slide showing pancreatic tissue encircling the second part of the duodenum. The arrow shows the duodenum (D)
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