Tuberculosis, a possible cause of intestinal bleeding
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Section: Abdominal imaging
Area of Interest: Abdomen Case Type: Clinical Cases
Patient: 54 years, female

Clinical History:

54-year-old woman attended the emergency department complaining of rectal bleeding. The blood test showed significant anaemia. In the upper endoscopy a clot was visualized on the descending duodenal portion with an ulcerous injury and adjacent inflammatory changes. The colonoscopy did not show relevant findings. Urgent surgery was required because of hypovolemia.

Imaging Findings:

In the unenhanced CT several calcium density images on mesentery can be observed (calcified adenopathies). In the contrast enhanced CT a hypodense lesion at the duodenum wall, contrast extravasation towards the intestinal lumen (compatible with active bleeding) and remarkable inflammatory changes in the mesentery fat can be shown. Extraluminal gas bubbles are also seen (pneumoperitoneum). Between the duodenum and right colon a tubular hypodense image can be observed, that could correspond to a fistulous tract. On the surgery a 3cm lesion was found on the antimesenteric border of duodenum with intraluminal growth and border bleeding. The histologic result showed: inflammatory granulomatous reaction in the duodenal lesion and extirpated adenopathies, necrotic areas in some adenopathies and flat ulcerations surrounded by granulomatous lesions at the duodenal mucosa. The findings were compatible with tuberculous etiology. After surgery the patient was treated with antituberculous drugs and controlled at the Department of Infectious Disease.

Discussion:

Intestinal TB may present as an inflammatory stricture, hypertrophic lesions resembling polyps or tumours, segmental ulcers and colitis. After the bacillus enters the gastrointestinal tract, it traverses the mucosa and lodges in the submucosa where it induces inflammatory changes that can lead to lymphangitis, endarteritis and fibrosis which can progress to mucosal ulceration, caseating necrosis and narrowing of the intestinal lumen. Diagnosing abdominal TB is difficult because its presenting signs, symptoms and laboratory abnormalities are non-specific and non-diagnostic. Symptoms of abdominal TB include abdominal pain, diarrhoea, fever, anorexia, weight loss, constipation and haemorrhage [2]. The most frequent symptom at presentation (in 90–100% patients) is abdominal colicky pain representing
intermittent bowel obstruction. Massive haemorrhage necessitating blood transfusion is very uncommon in gastrointestinal tuberculosis. Indeed, few cases have been reported worldwide. Gastrointestinal tuberculosis is reported to be difficult to diagnose, because its symptoms are varied and sometimes overlap with a broad range of other abdominal ailments, such as colorectal cancer, Crohn’s disease, ulcerative colitis, colonic lymphoma, amoebic colitis, periappendicular abscess and diverticulitis and it can be located in any region of the gastrointestinal tract, complicating the location of infected areas [3].

Chest radiographs are positive in only 20–50% of patients with intestinal TB. CT and abdominal ultrasound findings suggestive of abdominal TB include ascites, enlarged lymph nodes, omental thickening and bowel-wall thickening. Definitive diagnosis is based on histology, Ziehl-Neelsen staining for acid-fast bacilli and culture [1]. Colonoscopy with biopsy is the most useful non-operative diagnostic test for intestinal TB (identification of granulomatous lesions accompanied by necrosis and lymphangitis by biopsy) [2]. The management of abdominal TB relies on TB drugs; surgery is reserved for complications and uncertainty of diagnosis.

Intestinal TB may mimic other abdominal diseases, such as Crohn’s disease. Differentiating TB from Crohn’s disease is important, since treatment of these two disorders is very different. Both entities may present with mucosal ulcerations, nodularity, ulcers, pseudopolyps, luminal narrowing and strictures.

A timely diagnosis and initiation of therapy may prevent complications and improve outcomes [4]. It is imperative to consider gastrointestinal tuberculosis in the differential diagnosis of massive gastrointestinal bleeding.

**Differential Diagnosis List:** Intestinal TB, Crohn’s disease, Duodenal abscess, Intestinal TB, Duodenal neoplasia

**Final Diagnosis:** Intestinal TB

**References:**


Figure 1

Description: Mesenteric calcified adenopathy (arrow). Origin:
Figure 2

**a**

**Description:** Contrast extravasation (arrow) and extraluminal gas (arrowhead). **Origin:**

**b**

**Description:** Hypodense duodenal lesion (narrow arrow), extraluminal gas (arrowhead) and contrast extravasation (wide arrow). **Origin:**
**Figure 3**

![Image](image_url)

**Description:** Hypodense duodenal lesion (wide arrow), extraluminal gas (arrowhead) and contrast extravasation (narrow arrow). **Origin:**

![Image](image_url)

**Description:** Inflammatory changes in the mesentery fat and a tubular hypodense image between the duodenum and right colon, that could correspond to a fistulous tract (arrow). **Origin:**