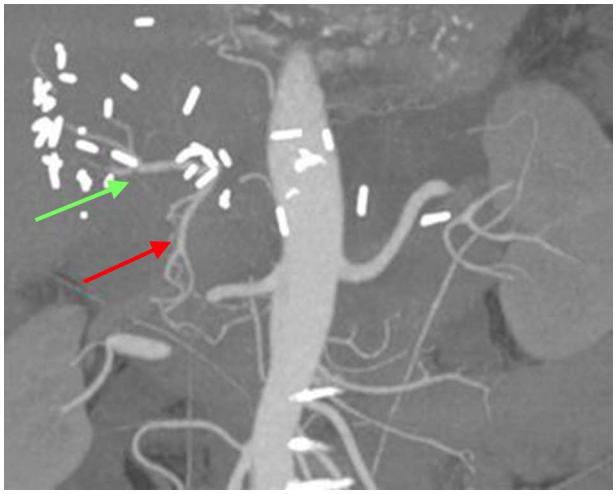

Fig. 2 – CT angiogram 15 days after surgery showing hepatic vascularization through the gastroduodenal artery (red) and proper hepatic artery (green).

As for the use of diagnostic biopsies, there is no clear consensus. Postoperative pathology studies are advocated as being the main definitive diagnostic method.[4]

Octreotide scintigraphy has a specificity close to 83%, thanks to the high affinity of octreotide for somatostatin receptors.[1,5] Classic PET-CT with 18-FDG provides little information.

The gold-standard treatment is surgical resection, which provides a 5-year survival that ranges from 74 to 92.5%. Nonetheless, it also has recurrence rates close to 19%, which means that adjuvant therapy should be considered.[7,9]

In our patient, the preoperative diagnosis by biopsy allowed us to plan for radical surgery. R0 surgery was performed with resection of the common hepatic artery. This technique, known as the Appleby procedure,[10] has been demonstrated to be safe, while increasing survival and ensuring the resectability of locally advanced tumors with vascular invasion. The tumoral obliteration of the common hepatic artery probably favored the vicarious hepatic vascularization through the gastroduodenal artery, as demonstrated by CT angiogram 2 weeks after the procedure (Fig. 2).

In short, although the diagnosis of PHNET is sometimes not early, surgical resection is the best option and provides the most favorable results.

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Intestinal Tuberculosis☆

Tuberculosis intestinal

In our setting, tuberculosis is on the rise because of factors such as inadequate patient treatment, HIV-related immunosuppression, resistance to treatment and declining socioeconomic conditions due to immigration.[1,2] Therefore, it should

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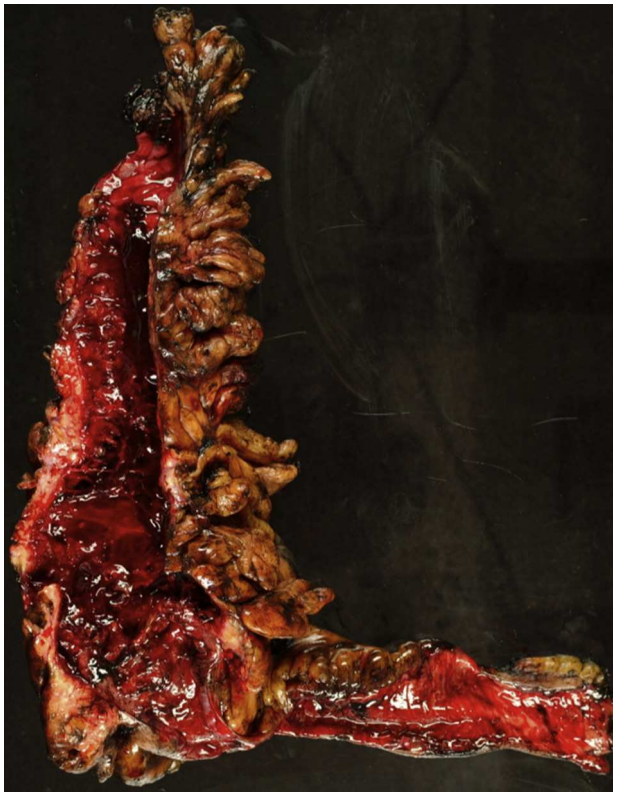

Fig. 1 – Abundant clotting in the lumen of a swollen ascending colon.

be included in differential diagnoses.[3] We present a case of pulmonary and intestinal tuberculosis that caused massive lower gastrointestinal bleeding.

Gastrointestinal tuberculosis is uncommon and usually secondary to pulmonary involvement or due to the consumption of unpasteurized milk.[4] The first reported case of peritoneal tuberculosis was recorded in 1843.[5] The most frequent intestinal location of this condition is the ileocecal area, where the bacillus is phagocytized by lymph tissue, absorbed by the intestinal mucosa and transferred to Peyer's patches.[6,7]

The main complications are intestinal obstruction (15%–100%), enteroenteric fistulas (2%–30%), intestinal perforation (1%–15%) and hemorrhage (2%–24%).[8]

We present the case of a 30-year-old Pakistani woman who came to our Emergency Department at 34 weeks of gestation due to premature rupture of membranes. She had had untreated anemia for the previous 2 years (Hb 9 g/dL), gastroesophageal reflux and limited weight gain (2 kg) during pregnancy, with no apparent cause. Patient evaluation indicated impaired fetal well-being, and she was transferred from her regional hospital for an emergency C-section due to maintained fetal bradycardia. The initial workup showed thrombocytopenia (99 000/mm^3), lactic acid 2.9 and albumin 1.6 g/dL. On venous blood gasometry, pH was 7.28, pCO_2 35 mm Hg, pO_2 62 mm Hg, HCO_3 16.4 mmol/L, and BE −10.3 mmol/L.

Chest radiograph demonstrated a bilateral reticulonodular pattern that was suspicious for tuberculosis (TB). Tuberculosis treatment was initiated with 4 drugs 24 h after her arrival to the ER, and the diagnosis was confirmed by computed tomography (calcified granulomas, peribronchovascular consolidation, numerous bilateral pulmonary nodules and hypodense nodular images in the spleen).

On the 4th day of hospitalization, the patient had profuse vaginal and rectal bleeding that led to cardiac arrest. Cardiopulmonary resuscitation was effective, followed by massive blood transfusion (hemoglobinemia 5 g/dL). Abdominal ultrasound showed free fluid compatible with hemoperitoneum. Revision surgery through the Pfannenstiel incision showed no hemorrhage and, given the patient's hemodynamic instability, the surgery was extended to a midline laparotomy. We observed hemoperitoneum secondary to cecal perforation with abundant slightly bloody material that was not fresh, a mass in the hepatic flexure and several omental implants (Figs. 1 and 2). The histopathology analysis confirmed peritoneal tuberculosis. A right hemicolectomy was performed with mechanical ileocolic anastomosis and supraaponeurotic mesh reinforcement.

The histopathology study reported no tuberculosis in the placenta; in the colon, chronic colitis was observed with abundant necrotizing granulomas and patchy areas of the ileal

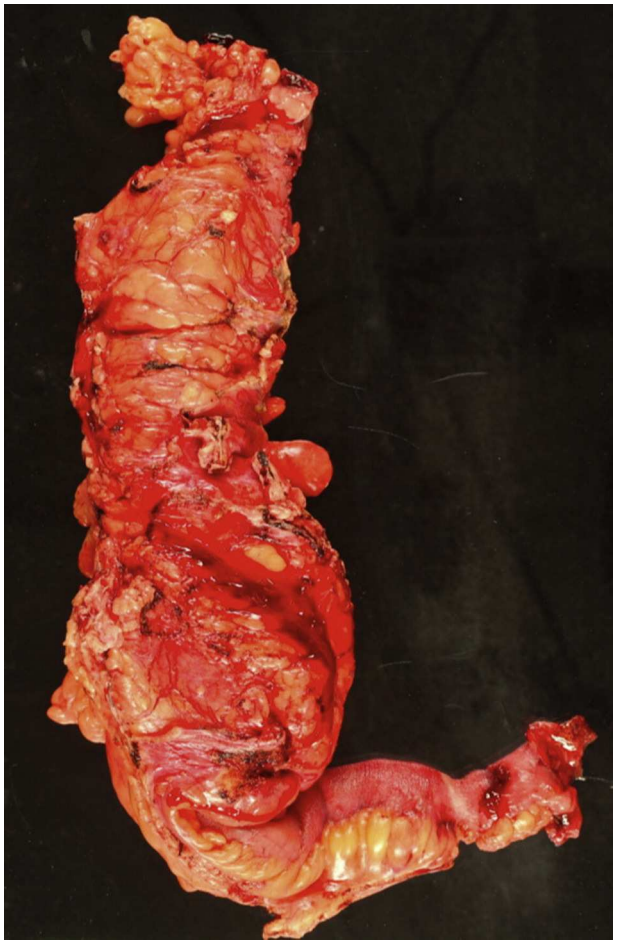

Fig. 2 – Mass and perforation of the cecum.

wall. Histochemistry techniques detected few acid-fast bacilli (positive Ziehl–Neelsen stain). DNA quality testing, with PCR amplification, was definitive for confirming the presence of *Mycobacterium tuberculosis* in the intestinal resection specimen (GenoQuickMTUB; Nehren, Germany). The culture from the bronchoalveolar lavage done on the 5th day confirmed the presence of *M. tuberculosis* in the lungs.

The postoperative recovery in the intensive care unit (ICU) was favorable until the 5th day post-op, at which time the patient presented dehiscence of the ileocolic suture that required reoperation, ileostomy and mucous fistula. One week after the reoperation, the patient developed ischemia of the ileostomy, which required another ileal resection of 4 cm. Meanwhile, she had a syndrome with inadequate hormone secretion secondary to rifampicin and tracheobronchitis secondary to a respiratory infection due to *Pseudomonas aeruginosa* and *Stenotrophomonas maltophilia*. One month after hospitalization, the patient also required vacuum-assisted closure (VAC Therapy®; KCI, Austin, TX, USA) for 15 days in the lower third of the laparotomy due to exposure of the underlying mesh and superficial infection at the surgical site caused by ampicillin-resistant *Enterococcus faecium*, until the skin was able to be closed. The patient was hospitalized in the ICU for one month and was discharged after 60 days. Bowel transit reconstruction is still pending.

Intestinal tuberculosis is not a frequent etiology of abdominal pain and/or acute abdomen, but it can be the cause of a perforation as well as hemorrhage. If the situation is extreme, as in this case, it is likely that the need for resection will be inevitable.

Intestinal tuberculosis causes the same morphological and clinical changes observed in chronic intestinal diseases, although hypoalbuminemia is detected in 70% of cases and hematocrit is lower than 35%. The tuberculin test is only positive in 50% of cases, but an active lesion is seen on the chest radiograph in 80% of patients.[3,9]

In the case we report, these very serious complications could probably have been avoided if tuberculosis had been suspected in a pregnant woman with extreme anorexia, cough with reddish sputum and night sweats.[10] Likewise, in a hemodynamically unstable patient with the need for vasoactive agents, massive transfusion and an episode of cardiac arrest, the gastrointestinal anastomosis was probably very risky, and damage control with double ostomy from the start could have prevented the 2 reoperations.

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