HISTOLOGICAL CHARACTERIZATION OF HETEROTOPIC MESENTERIC OSSIFICATION: AN UNUSUAL FINDING.

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Abstract

Heterotopic mesenteric ossification (HMO) is a rare benign entity, which consists of the formation of an ossifying pseudotumor at the base of the mesentery. It is generally preceded by an injury, trauma or abdominal surgery, and can develop weeks to years later. Histologically, it is characterized by the presence of fibrous septa in the mesentery that trap fat, nerves and vessels, formed by fibroblasts, osteoid tissue and bone, giving rise to very characteristic images as in the case we present.

Keywords: Heterotopic mesenteric ossification, intestinal obstruction, abdominal surgery.

Clinical case

We present the case of a 52-year-old patient with a history of splenectomy secondary to polytrauma. He presented to the emergency department for abdominal pain. Computed tomography showed a hypervascularised intraperitoneal mass with central star-shaped calcification suggestive of mesenteric carcinoid tumour. Surgical intervention was decided with findings of peritoneal splenosis with degenerated and calcified areas. Postoperatively, the patient presented with intestinal obstruction requiring a new operation, with extensive resection of the small intestine and colon. Pathological analysis showed an organised mesenteric haematoma with heterotopic mesenteric ossification (HMO), extensive fibrosis and focal sclerosis of the intestinal serosa, involving skeletal musculature with fat necrosis and foreign body type reaction with giant cells (Figures 1-3).

Discussion

HMO is a rare pathology, attributed to osteoblastic metaplasia of mesenchymal cells in response to severe inflammation, such as previous surgery or trauma[1]. Diagnosis is usually intraoperative, although it may be suspected by CT scan if calcifications are observed. The prognosis is generally

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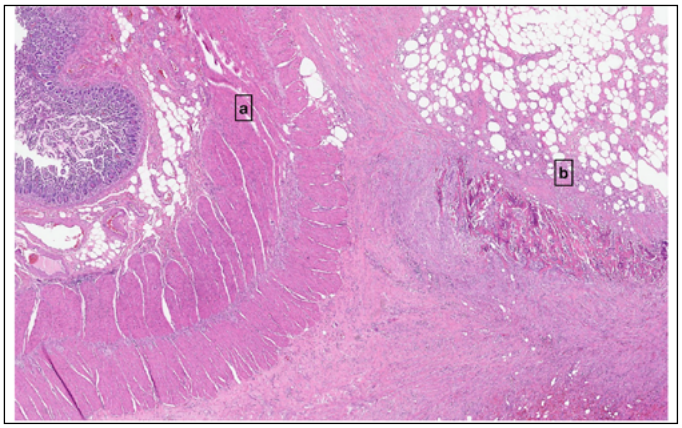

Figura 1. ***Microscopic image of a section of the intestinal wall (a) in which fibrosis of the serosa and mesentery with a focus of osteoid substance in its thickness can be seen (b).***

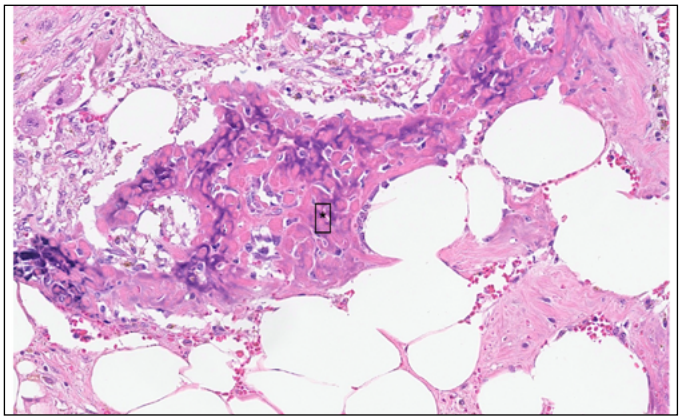

Figura 2. ***Disorganised mesenteric ossification focus (*).***

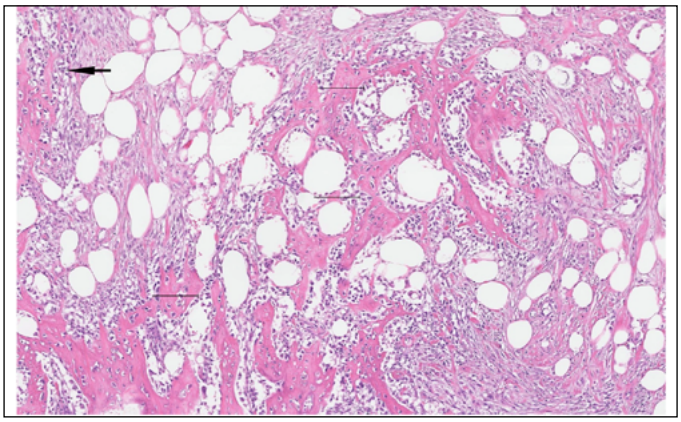

Figure 3. ***Detail of osteoid substance arranged in irregular, anastomosed trabeculae with identifiable osteoblastic cell rim (arrows).***

favourable, with conservative treatment being the treatment of choice to avoid further ossification[2].

Histologically, HMO is characterised by fibrous septa in the mesentery trapping fat, nerves and vessels composed of fibroblasts and variable amounts of osteoid and bone with a border of osteoblasts[3]. The differential diagnosis includes dystrophic calcifications and sarcomatous neoplasms[1].

This rare but important pathology, associated with a history of abdominal surgery or trauma, should not be overlooked. Although benign, its clinical presentation must be distinguished from malignant tumours, highlighting the importance of proper identification.

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