

Case Report

A Case of Jejunal Polypoid Hemangioma As Cause of Chronic Gastrointestinal Bleeding and Subtle Anemization Discovered by CT Scan with Intravenous Contrast

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1. Introduction

Hemangiomas are benign tumors that can be localized in different body sites such as liver, bones, pituitary gland, central nervous system, soft tissues, small intestine, orbits, joint synovia and others. While it's quite frequent to find completely asymptomatic hemangiomas in some body parts (e.g. liver, vertebrae), on the other hand it's very unusual to find them in other locations. It's important to know that hemangiomas, especially in uncommon sites, can lead to complications that can even put the patient's life at risk. In particular a small intestine localization is very rare, considering that tumors of the small intestine represent only 5% of the gastro-intestinal tract neoplasms [1]. Among this 5%, more than 90% are malignant and only the remaining 5% is represented by benign tumors. Hemangiomas represent only a minimal percentage (7-10%), preceded by adenomas, leiomyomas, lipomas and lymphangiomas [1].

However, unlike the other benign neoplasms of the small intestine, which are almost always asymptomatic or can occur with complications like intestinal occlusion, intussusception and perforation, hemangiomas generally produce gastro-intestinal haemorrhage [2-3]. For this reason, it's very important to diagnose hemangiomas of the small intestine as a cause of gastro-intestinal bleeding, despite it often represents a challenge for both the clinician and the radiologist and require an extensive gastrointestinal evaluation.

2. Case History

Herein we report a case of a 61 year old Caucasian female with a long history of previous gastro-intestinal bleeding, always manifesting with subtle anemia and fecal occult blood (FOB). Her medical history was unremarkable for other diseases. She had performed several radiological examinations in the past in order to find the bleeding's source, but all the examination made in other hospitals (esophagogastroduodenoscopy (EGDS), colonoscopy and endoscopic video capsule) did not identify an underlying

cause of bleeding. The patient came to E.R. of our hospital with the same symptoms. Therefore, in the clinical suspicion of an extra-luminal pathological process probably responsible of the bleeding, a CT scan with intravenous administration of contrast medium was performed.

The CT scan was performed previously with a baseline acquisition and then with a multiphasic dynamic protocol after intravenous injection of 80ml of Iomeprol 400 mgI/ml. The CT scan showed a polypoid mass with endophytic growth characterized by progressive centripetal enhancement in the consecutive phases of dynamic study in the proximal tract of the jejunum (Figure 1). This mass showed an arterial vascular afference, supported by a branch of the superior mesenteric artery, better visualized in 3D reconstructions (Figure 2). The supposed radiological diagnosis was that of a polypoid hemangioma of the jejunum responsible of chronic gastrointestinal bleeding, potentially dangerous for the patient's life.



Figure 1: Baseline CT scans (A) and after intravenous contrast medium administration in arterial phase (B), portal phase (C) and late phase (D): in the red circle the endophytic jejunal mass with progressive contrast enhancement.



Figure 2: MPR (A), MIP (B) and VR (C) reconstructions: in the red circle the polypoid jejunal mass. Green arrow shows the superior mesenteric artery branch that provides the arterial reference to the lesion.

3. Discussion

Hemangiomas are benign neoplasm composed by masses of capillaries, blood filled endothelial-lined spaces, or combinations thereof [4]. Histologically, they can be classified into cavernous, capillary or mixed type; the first one is the most common [3]. Unlike other benign tumors of the small intestine, hemangiomas are quite often symptomatic, manifesting themselves with hemorrhage in about 90% of cases. The extent of bleeding can be very different from case to case, varying from a chronic drip to a more frequent acute massive bleeding leading to anemia [5]. Anemization may therefore be chronic and progressive or acute, up to cases of potentially lethal bleeding. More rarely, similar to other benign neoplasms of the small intestine, hemangiomas can manifest with complications such as intestinal obstruction, intussusception or perforation. Hemangiomas of the small intestine are usually polypoid, quite always found in the mid-jejunum and can vary in numbers (solitary or multiple) and sizes (from a few millimetres to several centimeters). The morphological aspect is generally related to the histological type, but a clear differentiation is not always possible. The diagnosis of small bowel tumors is a clinical and radiological challenge,

because the region is not simply reached by conventional diagnostic modalities.

CT with contrast medium administration is nowadays frequently used as fundamental method in the study of patients with gastro-intestinal bleeding whose cause has not been demonstrated with esophagogastroduodenoscopy or colonoscopy or in those patients in which endoscopy provides only a suspicious of the presence of a mass. CT scans can usually demonstrate thickening of the bowel wall of involved loops with dishomogeneous, persistent contrast enhancement of the hemangioma. Other suitable radiological or endoscopic examinations are barium study of the small bowel (single or double contrast study) after oral assumption or through enteroclysis, video-endoscopy with capsule, scintigraphy with marked erythrocytes, and angiography [6, 7]. However, barium studies are very limited because the mass must be of sufficient size to cause intraluminal or intramural nodular defects and even the other methods may not certain lead to recognize the lesion.

This case provide us to confirm that abdominal CT scan with intravenous administration of contrast medium remains therefore a fundamental radiological examination

in these particular clinical settings in which, despite the clinical examination, the role of the radiologist is top-flight because of the life-threatening nature of the disease.

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