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Small Intestinal Hemangioma: A Case Report

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Statistical Analysis C
Data Interpretation D
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Conflict of interest: None declared

Patient: Female, 46-year-old
Final Diagnosis: Hemangioma
Symptoms: Abdominal distension • abdominal pain • anemia
Medication: —
Clinical Procedure: Colonoscopy • laparotomy
Specialty: Gastroenterology and Hepatology • Pathology

Objective: Rare disease

Background: Hemangiomas are benign vascular neoplasms that originate from fast-growing embryonic mesodermal tissue and have a proliferation of endothelial cells, which manifest themselves in different forms, locations, and dimensions. Owing to its rarity and similarity of symptoms with other chronic bowel diseases, intestinal hemangioma is a differential diagnosis to be considered in patients presenting with symptoms such as abdominal pain and anemia.

Case Report: A 46-year-old woman with a history of diffuse abdominal pain and abdominal distension for 20 years presented with a worsening of symptoms in the past year. She denied weight loss or changes in bowel habits or stool appearance. Laboratory investigations showed microcytic hypochromic anemia. Colonoscopy results were normal. A contrast-enhanced abdominal computed tomography scan showed focal and concentric thickening of the small intestine, measuring 8.3 cm, and associated with calcifications, intestinal dilation, mesenteric lymph node enlargement, and vascular dilatation and consistent with infectious granulomatous diseases such as intestinal tuberculosis, carcinoid tumor, Crohn's disease, and lymphoma. The tuberculin skin test resulted in a strong 25-mm reaction. We suspected intestinal tuberculosis or expansive injury, and the patient underwent exploratory laparotomy with visualization of a 4- to 5-cm bluish/blackish vegetating lesion located 220 cm from the Treitz angle. The anatomopathological study showed cavernous hemangioma of the small intestine, measuring 2.6×1.0 cm. The patient recovered well and remained asymptomatic.

Conclusions: Although rare, intestinal hemangioma should be on the list of differential diagnoses for chronic intestinal diseases, especially if there is anemia due to coexisting iron deficiency.

Keywords: Crohn Disease • Diagnosis, Differential • Hemangioma, Cavernous • Inflammatory Bowel Diseases

Full-text PDF: https://www.amjcaserep.com/abstract/index/idArt/929618

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Background

Hemangiomas are benign vascular neoplasms that originate from fast-growing embryonic mesodermal tissue and are characterized by a proliferation of endothelial cells, which manifest themselves in different forms, locations, and dimensions [1]. Based on their histological appearance, hemangiomas are classified into 3 categories: capillary, cavernous, and mixed. The cavernous hemangioma is the most common type. Hemangiomas are responsible for only 0.05% of all cases of gastrointestinal neoplasms [2].

Small intestine hemangioma is a rare disease, responsible for 7% to 10% of all benign tumors in this location [3]. It may have no clinical manifestations or it may cause symptoms such as low digestive bleeding, abdominal pain, and chronic symptoms of anemia. Less commonly, hemangiomas can cause complications such as intussusception, obstruction, or intestinal perforation [4]. A study published in 2009 showed a prevalence of 7.7% of intestinal hemangioma in 1044 patients with gastrointestinal bleeding. The lesions were located in the jejunum in 7 patients, ileum in 5 patients, and both jejunum and ileum in 1 patient [5].

Because the symptoms of intestinal hemangioma are similar to those of other chronic bowel diseases, such as inflammatory bowel disease or tuberculosis, it is a differential diagnosis to be considered in these situations. Moreover, intestinal hemangioma should be considered in all patients under investigation for anemia or gastrointestinal bleeding. Therefore, this article reports a case of a patient presenting with abdominal pain and anemia who was diagnosed with intestinal hemangioma and discusses the differential diagnosis.

Case Report

A 46-year-old woman was admitted to the emergency department with diffuse abdominal pain and abdominal distension. She had these symptoms in a milder intensity since she was 26 years old, but they had worsened in the last year. She denied weight loss or changes in bowel habits or stool appearance. The physical examination findings were unremarkable. Laboratory investigation showed microcytic hypochromic anemia, without other variations. The patient's colonoscopy results were normal. A contrast-enhanced abdominal computed tomography (CT) scan showed focal and concentric thickening of small intestine measuring 8.3 cm, associated with calcifications, intestinal dilation, mesenteric lymph node enlargement, and vascular dilatation (**Figure 1**), consistent with infectious granulomatous diseases such as intestinal tuberculosis, carcinoid tumor, Crohn's disease, or lymphoma. The tuberculin skin test resulted in a strong 25-mm reaction. Because of a suspected intestinal tuberculosis or expansive injury, the patient underwent an exploratory laparotomy with visualization and resection of a 4- to 5-cm bluish/blackish vegetating lesion located 220 cm from the Treitz angle (**Figures 2, 3**).The anatomopathological study showed a cavernous hemangioma of the small intestine measuring 2.6×1.0 cm (**Figure 4**; hematoxylin and eosin staining, ×100) and characterized by the proliferation of vessels in the mucous chorion, forming large cavernous vascular channels with blood-filled sinus spaces. The endothelium was lined by a single layer of flattened cells; it lacked atypia or mitotic activity and was surrounded by a robust eosinophilic adventitial layer with smooth muscle, fibroblasts, and a moderate degree of fibrosis. The patient recovered well and remained asymptomatic after surgery.

Figure 1. Contrast-enhanced abdominal computed tomography (CT) scan showed focal and concentric thickening of the small intestine measuring 8.3 cm, associated with calcifications, intestinal dilation, mesenteric lymph node enlargement, and vascular dilatation.

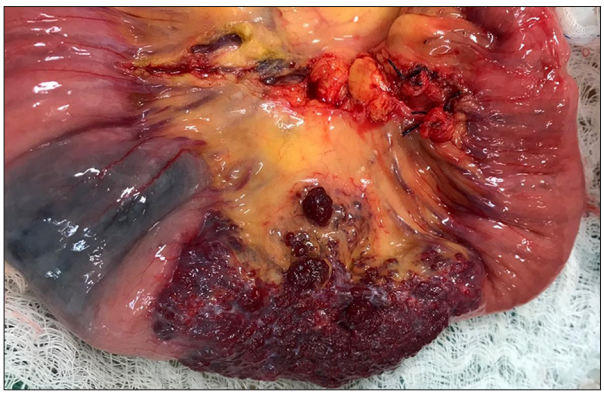

Figure 2. Bluish-colored intestinal lesion measuring 4 to 5 cm in length, removed via exploratory laparotomy.

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Figure 3. Bleeding bluish-colored intestinal lesion measuring 4 to 5 cm in length in the small intestine mucosa.

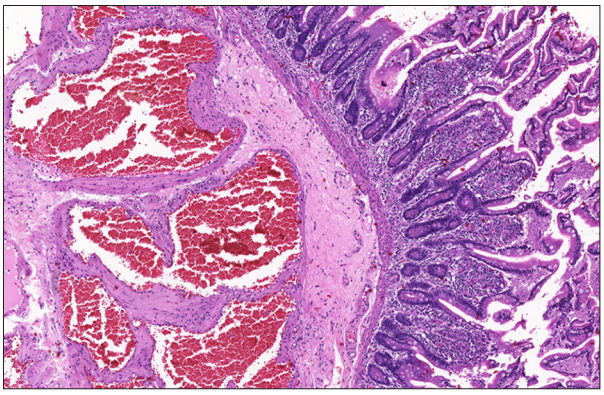

Figure 4. This photomicrograph shows large vascular channels in the submucosa, with blood-filled spaces. The vessel walls are surrounded by a moderate degree of fibrosis, and the endothelium lacks atypia (hematoxylin and eosin staining, ×100).

Discussion

Gastrointestinal symptoms such as abdominal pain and distension can be presented in a wide variety of differential diagnoses and most often require complementary tests to make the correct diagnosis. In this report, the initial hypothesis was inflammatory bowel disease, more specifically Crohn's disease, owing to the symptoms of abdominal pain with previous episodes of intestinal obstruction. Intestinal tuberculosis is an important differential diagnosis in Brazil because of the high prevalence of this infectious chronic disease in the country.

Crohn's disease is a chronic entity with a multifactorial etiology, which can progress to persistent intestinal damage and functional disability, causing impairments in a patient's quality of life [6]. Common symptoms include abdominal pain, diarrhea, fever, and weight loss, most of which were not present in our present case. More than one-third of patients have disease complications, such as stenoses, fistulas, or abscesses at the time of diagnosis, and about 50% will undergo surgery for the condition at some time in their lives [6]. The disease should be investigated in all individuals who have these symptoms or in the presence of any typical alteration in complementary exams, as in the present case. The endoscopic approach includes performing an ileocolonoscopy, with biopsies from all the segments, including the terminal ileum [7]. Radiologic exams such as magnetic resonance imaging, computerized enterotomography and trans-abdominal ultrasonography are complementary to endoscopy study and offer the opportunity to investigate the presence of complications, such as stenoses and fistulas [7]. In inconclusive cases with the presence of complications, as in the present case, surgery may be indicated.

Intestinal tuberculosis is an important differential diagnosis to be considered in immunocompromised individuals, in patients who migrate to affected areas, and in residents of endemic areas [8], such as our patient. The predominant symptoms are abdominal pain, weight loss, bloating, fever, anorexia, vomiting, and diarrhea [9]. Endoscopic characteristics include typical lesions such as colonic ulcers, involvement of the ileocecal valve, and pseudopolyps [10]. As a differential diagnosis, the presence of longitudinal or aphthous ulcers, a parallelepiped pattern, and perianal lesions are most prevalent in Crohn's disease [10]. In the case of a diagnosis of tuberculosis, the tuberculin skin test is part of the arsenal of complementary tests, but it has limited value in populations vaccinated with BCG, as in Brazil, because of a high rate of false-positive results [11]. In our patient, despite the positivity of the tuberculin skin test, the histological analysis did not show findings suggestive of intestinal tuberculosis.

Another differential diagnosis is expansive lesions, such as adenocarcinoma and gastrointestinal lymphomas. Adenocarcinoma is located predominantly in the second duodenal portion, and the main symptoms are bleeding, intestinal obstruction, obstructive jaundice, vomiting, and consuming syndrome [12]. Primary gastrointestinal lymphoma is a rare malignancy and comprises lymphomas that originate from the gastrointestinal tract. In a systematic review [13], the authors reported that the main symptom of gastrointestinal lymphoma is abdominal pain (59.3%). The initial location of the lymphoma is in the ileocecum (37.2%), and 53.6% area diffuse large B-cell lymphoma subtype. The combination of surgery and chemotherapy is the most prescribed treatment (60.7%). The factors associated with higher survival were the presence of B-cell lymphoma and ileocecum location, while advanced stage and B symptoms were associated with poorer survival [13].

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Of all gastrointestinal neoplasms, hemangioma is responsible for approximately 0.05% of the cases [2]. The clinical manifestation is mainly represented by gastrointestinal bleeding, hidden or not, and anemia due to iron deficiency. Presently, with the advent of the endoscopic capsule and balloon-assisted enteroscopy, the diagnosis of hemangioma has become less dependent on surgical methods, since most intestinal vascular abnormalities are rarely visible on CT scan and magnetic resonance imaging [2,14]. Hu et al [2] studied 37 patients diagnosed with intestinal hemangioma from 2000 to 2018. The most common topography was in the jejunum (60.9%). It is important to mention that, in contrast to our case, most of their diagnoses were performed by endoscopic methods (91.9%) [2]. Regarding the treatment, the authors observed that 17 cases (45.9%) were treated endoscopically according to guidelines of bowel bleeding treatment [2], and surgical procedure should be considered as the last option [12]. As we did not have a conclusive diagnosis, laparoscopy was chosen to conduct a better evaluation. According to the anatomopathological results, a diagnosis of intestinal cavernous hemangioma was confirmed.

Other differential diagnoses should be considered in patients with abdominal pain, such as ischemic colitis, systemic vasculitis, and drug-induced colitis, in addition to infectious conditions caused by *Yersinia enterocolitis*, histoplasmosis, amebiasis, helminthiasis, *Clostridium difficile*, or cytomegalovirus infection [15].

Conclusions

Clinical, endoscopic, and radiological manifestations of hemangioma and other gastrointestinal diseases overlap, a fact that can delay accurate diagnosis owing to the wide range of possible etiologies. Intestinal hemangioma, although rare, should be on the list of differential diagnoses for intestinal diseases. The medical team must be alert and consider this entity, especially in patients with anemia or intestinal bleeding.

Conflicts of Interest

None.

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