

# A giant hemangioma of the sigmoid colon as a cause of lower gastrointestinal bleeding in a young man

Lucas Fair, MD<sup>a</sup> , Benjamin Gough, DO<sup>a</sup>, Adatee Oknokwo, MD<sup>a</sup>, and Ronney Stadler, MD<sup>b</sup>

<sup>a</sup>Department of Surgery, Baylor University Medical Center, Dallas, Texas; <sup>b</sup>Texas Oncology, Division of Texas Colon and Rectal Specialists, Dallas, Texas

## ABSTRACT

Although hemangiomas are among the rarest causes of lower gastrointestinal bleeding, they should be considered in young adults with recurrent, painless gastrointestinal bleeding. We present a case report of a 37-year-old man with a 2-month history of intermittent rectal bleeding who had a single large hemangioma in the sigmoid colon, successfully treated with elective laparoscopic sigmoid resection.

**KEYWORDS** Hemangioma; rectal bleeding; sigmoid colon

Hemangiomas of the gastrointestinal (GI) tract are uncommon benign vascular lesions that generally affect the rectosigmoid junction.<sup>1</sup> They can affect any age group but are more common in young adults, often in their third decade of life.<sup>2–4</sup> These lesions are a rare but important cause of lower GI hemorrhage. Here we present the case of a man who presented with GI bleeding secondary to a large cavernous hemangioma.

## CASE REPORT

A 37-year-old man with no past medical or past surgical history presented to his primary care physician with 2 months of intermittent rectal bleeding. He reported passing large amounts of fresh blood with his bowel movements and also complained of mild left lower quadrant abdominal pain. Fecal occult blood testing was positive. There was no evidence of anemia or other laboratory abnormalities on biochemical evaluation. Computed tomography (CT) of the abdomen and pelvis demonstrated an eccentric, mass-like thickening of the mid-sigmoid colon containing enhancing vascular structures and ectopic phleboliths without evidence of obstruction (*Figure 1a*).

The patient was referred to the colorectal surgery service. A colonoscopy revealed a large hemangioma in the sigmoid colon. An elective laparoscopic sigmoid resection was then done (*Figure 1b, 1c*). The patient tolerated the procedure well and was discharged home on postoperative day 3. Final pathology demonstrated a cavernous hemangioma with submucosal, muscularis

propria and pericolic adipose tissue involvement, but no involvement of any margins (*Figure 1d*). A repeat CT scan obtained for persistent abdominal wall pain 7 weeks after surgery showed no acute abnormalities. The patient continued to do well 3 months postoperatively, with no recurrent episodes of bleeding.

## DISCUSSION

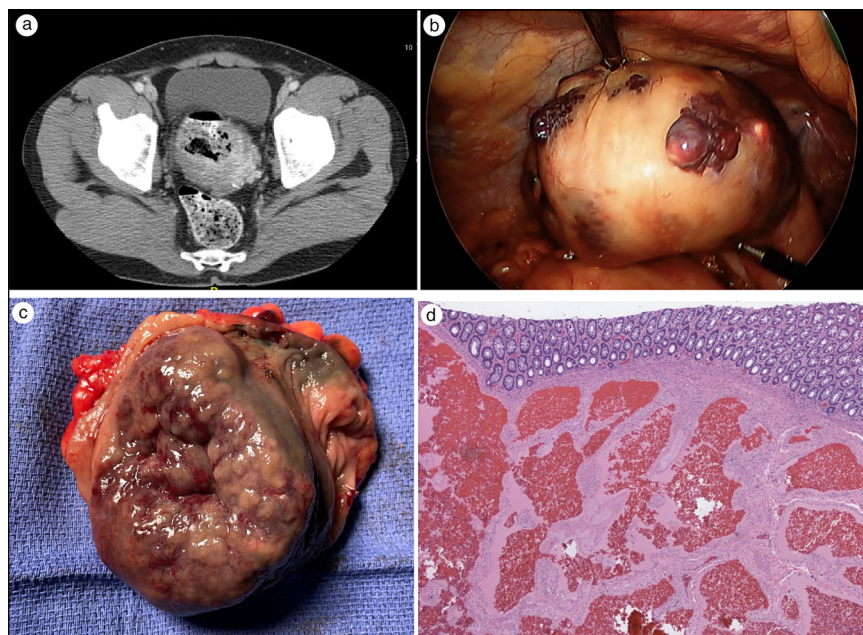
Colon hemangiomas are among the rarest tumors of the lower GI tract. Among GI hemangiomas, cavernous hemangiomas are the most common type. Eighty percent of hemangiomas are symptomatic, and the most common clinical feature is GI bleeding.<sup>3,5</sup> The bleeding is generally painless and recurrent. Recurrent episodes of painless bleeding can occur in 60% to 90% of cases.<sup>6</sup> Cavernous hemangiomas have the potential for massive hemorrhage due to their greater size and blood volume.<sup>1</sup> Hemangiomas can also contain phleboliths, which are calcified well-circumscribed densities seen in 50% of cases.<sup>7</sup>

The recommended treatment of cavernous hemangioma of the GI tract is surgical resection. This can be achieved via a laparoscopic, robotic, or open approach. Nonoperative therapy is limited. Local control of bleeding has been described, but has had limited success. Ligation of the arteries feeding the lesion has been attempted, but this technique appears unreliable as subsequent bleeding has occurred.<sup>8–10</sup> There have been case reports of successful endoscopic management. In one case, a small, pedunculated hemangioma was managed endoscopically using snare polypectomy and electrocautery.<sup>10</sup>

**Corresponding author:** Lucas Fair, MD, Department of Surgery, Baylor University Medical Center, 3500 Gaston Avenue, Dallas, TX 75246 (e-mail: [Lucas.fair@bswhealth.org](mailto:Lucas.fair@bswhealth.org))

The authors report no funding or conflicts of interest. Informed consent was obtained from the patient for publishing this case report.

Received May 6, 2022; Revised July 5, 2022; Accepted July 11, 2022.



**Figure 1.** (a) CT of the abdomen and pelvis demonstrating a  $7.2 \times 5.6 \times 2.6$  cm eccentric, mass-like thickening of the mid-sigmoid colon containing enhancing vascular structures and ectopic phleboliths without evidence of obstruction. (b) Intraoperative findings of a large hemangioma of the sigmoid colon. (c) Surgical specimen from the elective laparoscopic sigmoid resection. (d) Final pathology showing a cavernous hemangioma with submucosal, muscularis propria, and pericolonic adipose tissue involvement.

Recent large retrospective reviews have evaluated the role of endoscopy in young patients. One study evaluated endoscopy reports of 9,098 young patients with outlet bleeding, suspicious bleeding, hemorrhage, and occult bleeding. In patients with classic outlet bleeding, defined as bright red blood after defecation with no family history of colorectal neoplasia or change in bowel habits, the yield of a complete diagnostic colonoscopy was low. Only 6.7% of patients with classic outlet bleeding had lesions seen on colonoscopy. Younger patients with outlet bleeding had a particularly low yield on colonoscopy, as only 3/703 (1.6%) had adenomas  $>1$  cm, and no invasive cancers were detected. Notably, hemangioma was not recorded as a cause of bleeding in any of the 9,098 patients.<sup>11</sup> Another retrospective study reviewed the results of 361 patients who underwent colonoscopies for hematochezia and found that the most common cause was hemorrhoids (69.6%). Again, hemangiomas were not recorded as a cause of bleeding.<sup>12</sup> CT can be considered a key diagnostic adjunct, as wall thickening and extraluminal extension of any masses seen on colonoscopy can be accurately evaluated prior to surgical intervention.

Despite the rarity of colorectal giant hemangiomas, they should be considered in any young adult patient presenting with recurrent, painless lower GI bleeding. Colonoscopy should be considered due to the potential for massive hemorrhage, despite the low likelihood of significant pathology being identified in this patient population.<sup>11,12</sup>

#### ORCID

Lucas Fair  <http://orcid.org/0000-0002-6082-5827>

1. Tan MC, Mutch MG. Hemangiomas of the pelvis. *Clin Colon Rectal Surg.* 2006;19(2):94–101. doi:10.1055/s-2006-942350.
2. Mascarenhas M, Morais R, Teixeira R, Macedo G. An unexpected colonic polyp: cavernous hemangioma. *Ann Coloproctol.* 2021 [published online ahead of print, 2021 Jul 13]. doi:10.3393/ac.2020.00535.0076.
3. Fenoglio-Preiser CM, Pascal RR, Perzin KH. *Atlas of Tumor Pathology, Second Series, Fascicle 27: Tumors of the Intestines.* Washington, DC: Armed Forces Institute of Pathology; 1990.
4. Amati AL, Hecker A, Schwandner T, et al. A hemangioma of the sigmoid colon mesentery presenting as a retroperitoneal tumor: a case report and review. *World J Surg Oncol.* 2014;12:79. doi:10.1186/1477-7819-12-79.
5. Babcock WW, Jonas KC. Hemangioma of the colon. *Am J Surg.* 1950;80(7):854–859. doi:10.1016/0002-9610(50)90466-1.
6. Coppa GF, Eng K, Localio SA. Surgical management of diffuse cavernous hemangioma of the colon, rectum and anus. *Surg Gynecol Obstet.* 1984;159(1):17–22.
7. Aylward CA, Orangio GR, Lucas GW, Fazio VW. Diffuse cavernous hemangioma of the rectosigmoid—CT scan, a new diagnostic modality, and surgical management using sphincter-saving procedures. Report of three cases. *Dis Colon Rectum.* 1988;31(10):797–802. doi:10.1007/BF02560110.
8. Jeffery PJ, Hawley PR, Parks AG. Colo-anal sleeve anastomosis in the treatment of diffuse cavernous haemangioma involving the rectum. *Br J Surg.* 1976;63(9):678–682. doi:10.1002/bjs.1800630903.
9. Gabriel WB. *The Principles and Practice of Rectal Surgery.* 5th ed. Springfield, IL: Charles C Thomas; 1963.
10. Ogasawara N, Suzuki M, Adachi K, et al. Endoscopic resection of a pedunculated cavernous hemangioma of the sigmoid colon: a case report. *Case Rep Gastroenterol.* 2019;13(3):418–422. doi:10.1159/000503276.
11. Marderstein EL, Church JM. Classic “outlet” rectal bleeding does not require full colonoscopy to exclude significant pathology. *Dis Colon Rectum.* 2008;51(2):202–206. doi:10.1007/s10350-007-9123-1.
12. Koh FH, Seah A, Chan D, Ng J, Tan KK. Is colonoscopy indicated in young patients with hematochezia. *Gastrointest Tumors.* 2018;4(3-4):90–95. doi:10.1159/000481686.