

Large cavernous hemangioma in the cecum treated by laparoscopic ileocecal resection

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Abstract

A cavernous hemangioma of the cecum is a rare vascular malformation but is clinically important because of the possibility of massive bleeding. We report a case of a large cavernous hemangioma with pericolic infiltration in the cecum which was removed successfully using minimally invasive surgery.

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INTRODUCTION

Hemangiomas of the large intestine are relatively

uncommon benign tumors which can occur anywhere in the gastrointestinal tract^[1]. These are clinically important vascular malformations because of the possibility of massive bleeding. Although a variety of histological and clinical types of hemangioma exist, the cavernous and capillary subtypes are most commonly encountered. Recent advances in colonoscopic techniques have led to successful endoscopic resection in selected cases^[2-4], but most large lesions have been treated surgically^[5,6]. We report the case of a large cavernous hemangioma in the cecum with pericolic infiltration which was removed successfully using minimally invasive surgery.

CASE REPORT

A 37-year-old woman was referred to her local hospital because of intermittent rectal bleeding. Colonoscopy revealed a blue polypoid lesion with a nodular surface in the cecum (Figure 1). A hemangioma was suspected. She was transferred to our hospital for further evaluation and surgical treatment.

The physical examination revealed no specific signs. Abdominopelvic computed tomography (CT) showed a lesion in the cecum protruding extraluminally with heterogenous enhancement (Figure 2). The operative findings suggested a tumor involving the cecum and extending into the pericolic fat. Laparoscopic-assisted ileocecal resection and side-to-end ileo-ascending colon anastomosis were carried out. Macroscopically, the surgical specimen was a 5.8 cm × 4.2 cm cavernous hemangioma involving the entire wall of the colon and extending into the pericolic fat (Figure 3). Microscopically, the tumor consisted of large, dilated, blood-filled vessels lined by flattened endothelium. The vascular walls were thickened focally by adventitial fibrosis (Figure 4). Postoperatively, the patient has recovered well with no recurrence of symptoms.

DISCUSSION

Hemangiomas are rare lesions of the colon, but vascular malformations of the gastrointestinal tract have been reported since 1839^[7]. According to the literature, these lesions originate from embryonic sequestrations of mesodermal tissue^[8]. Histologically, hemangiomas are distinct from telangiectasias and angiodysplasias, and most colonic hemangiomas are the capillary or



Figure 1 Colonoscopy of the cecum showing a bluish nodular lesion.

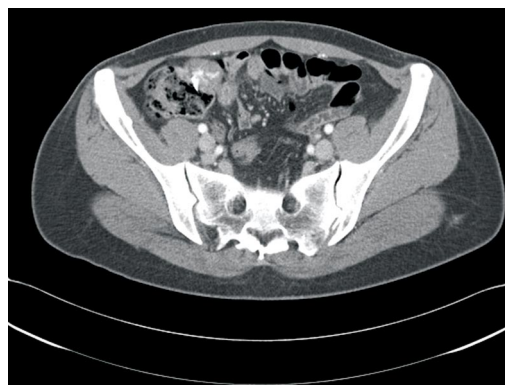


Figure 2 Abdominopelvic computed tomography showing a lesion in the cecum protruding extraluminally with heterogenous enhancement.



Figure 3 Macroscopically, the surgical specimen was a cavernous hemangioma.

cavernous subtype. Capillary hemangiomas consist of a proliferation of small capillaries composed of thin-walled spaces lined by endothelial cells, while cavernous hemangiomas consist of large spaces lined by single or multiple layers of endothelial cells^[9]. The capillary subtype is usually solitary and causes no symptoms, while the cavernous subtype presents with bleeding (60%-90%), anemia (43%), obstruction (17%), and, rarely, with platelet sequestration, although approximately 10% of patients remain asymptomatic^[10]. The endoscopic findings of hemangiomas of the colon vary. Grossly, hemangiomas appear as soft, compressible bluish or deep red submucosal lesions, with dilated, engorged veins in the rectal wall^[5]. However, they can be difficult to diagnose in some cases, especially if the hemangioma has an unusual color or is covered. A histological diagnosis before treatment may be difficult because of the risk of uncontrollable bleeding following a biopsy^[1,4]. Hence, these lesions should not be biopsied. Abdominal CT can provide useful information about the size of the lesion and its extension to adjacent organs. Visceral angiography may also be useful in excluding coexisting hemangiomas at other sites in the gastrointestinal tract^[5].

Complete surgical resection is the best treatment for large or diffuse lesions^[5], although endoscopic resection has sometimes been recommended for hemangiomas that are pedunculated, polypoid, small, and limited

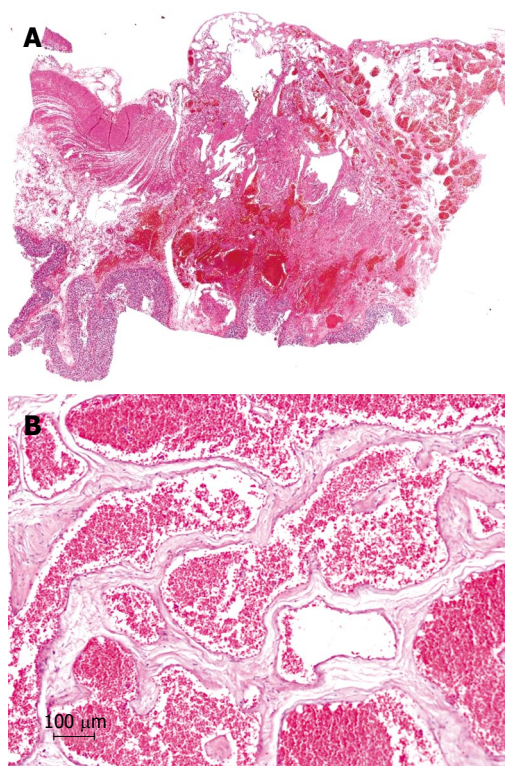


Figure 4 HE staining of the hemangioma. A: Histological section showing large, dilated, blood-filled vessels lined by flattened endothelium (HE, $\times 1$); B: The vascular walls were thickened focally by adventitial fibrosis (HE, $\times 100$).

to the submucosal layer according to endoscopic ultrasonography^[4]. Polypoid hemangiomas sometimes involve the entire wall of the colon, extending through the mesocolon and mesentery, as in our case^[5]. In summary, we performed laparoscopic resection of a large cavernous hemangioma in the cecum. Although these lesions are rare, a better understanding of these lesions should help to obtain a definite diagnosis and devise an appropriate treatment plan.

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