Cavernous hemangioma: Unusual benign tumor of the transverse colon

Kavernöz hemanjiom: Transvers kolonun alışılmadık benign tümörü

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Cavernous hemangioma of the colon is an uncommon disease and a rare cause of bleeding. Few cases have been reported in the literature. The rectosigmoid is the most common site of this disease in the gastrointestinal tract, while colonic localization is very uncommon. We report the case of a 66-year-old female with recurrent episodes of rectal bleeding. She underwent a colonoscopy and was diagnosed with diffuse cavernous hemangioma of the transverse colon. A laparoscopic extended right hemicolectomy was performed. Colonic hemangiomas are very rare vascular malformations and their clinical presentation is usually acute, recurrent or chronic rectal bleeding. This tumor can be diagnosed as solitary, multiple, or part of a more complex syndrome with cutaneous manifestations. They can also invade adjacent structures. Colonoscopy is a useful diagnostic test. The extension of the lesion, its morphology and its localization can be established, but imaging such as magnetic resonance or computerized tomography scan has to be performed. Sometimes, however, recognition of these tumors is difficult and can be a cause of failed surgical treatment and severe complications. Surgical treatment is recommended, after a full diagnostic evaluation for other causes of gastrointestinal bleeding.

Key words: Cavernous hemangioma, rectal bleeding, hemangiomatosis

Kolon tutulumlu kavernöz hemanjiomu nadir görülen bir hastalık ve kanama nedenidir. Literatürde az sayıda vaka bildirilmiştir. Bu hastalığın gastrointestinal kanalda en sık yerleştiği yer rektosigmoid bölgedir ve kolon yerleşiminde çok nadir görülür. Tekrarlayan rektal kanama ataklarıyla gelen 66 yaşında bir kadın hastayı sunuyoruz. Kolonoskopi yapılmış ve transvers kolonun diffüz kavernöz hemanjiomu tanısı almıştır. Bunun ardından laparoskopik geniş sağ hemi – kolektomi uygulanmıştır. Kolonu tutan hemanjiomlar, nadir görülen damarsal malformasyonlardır ve kliniğe başvuru nedeni genellikle akut, tekrarlayan veya kronik rektal kanama tarzındadır. Bu tümöre, tek, çok sayıda veya cilt bulgularıyla birlikte giden kompleks bir sendromun parçası olarak tanı konabilir. Komşu yapıları invaze edebilmektedir. Kolonoskopi faydalı bir tanısal testtir. Lezyonun yayılımı, morfolojisi ve yerleşimi tespit edilebilse de magnetik rezonans, bilgisayarlı tomografi gibi görüntüleme yöntemleri de uygulanmalıdır. Ancak bazen, bu tümörlerin tanınması zor olduğundan cerrahi tedavinin başarısızlığı ve ciddi komplikasyonlara neden olabilmektedir. Gastrointestinal kanamanın olası nedenlerinin tamamen araştırılmasından sonra cerrahi tedavi önerilmektedir.

Anahtar kelimeler: Kavernöz hemanjiom, rektal kanama, hemanjiomatozis

INTRODUCTION

Cavernous hemangioma is a rare cause of gastrointestinal bleeding. It is being recognized with increasing frequency and is considered a benign vascular malformation of the gastrointestinal tract (1). Although they are uncommon, it is very important that these lesions are recognized by radiologists because accurate diagnosis is crucial to avoid a biopsy that could cause severe hemorrhage (2). While these vascular tumors are often seen in young patients, our patient was 66 years old and was diagnosed as having cavernous hemangioma of the transverse colon without extraintestinal manifestations. Although the need for early recognition has been proven, a long history of rectal bleeding and anemia is often encountered before a correct diagnosis is achieved. One reason for the delay in diagnosis is that pain is rare in these patients. A pre-operative imaging study is mandatory to confirm the diagnosis and to evaluate the full extent of the lesions. The treatment of choice for the symptomatic patient is complete surgical resection, highlighting again the importance of an accurate diagnosis (3).

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CASE REPORT

A 66-year-old female presented with a two-month history of rectal bleeding. Physical examination revealed pallor and no evidence of mucocutaneous vascular lesions. The rest of the examination was unremarkable. Colonoscopy showed extensive hypervascular submucosal lesion in the transverse colon with exophytic features. This lesion was suspected to be a vascular lesion during endoscopy, and an unusual bleeding appeared while the biopsy was being performed. The pathologist could reach no conclusion about vascular etiology. An abdominal computerized tomography (CT) scan revealed no other lesions. During surgery, an isolated transverse colon lesion was confirmed. An extended right hemicolectomy with a functional end-to-end ileo-transverse colon anastomosis was performed (Figure 1). The tumor measured 3x2x2 cm and infiltrated the entire wall, extending into the surrounding fatty tissue (Figure 2). Pathological examination of the specimen showed typical hemangioma histology (Figure 3). On the fifth day, the patient was discharged, and at the one-year follow-up, no other recurrent rectal bleeding had occurred.

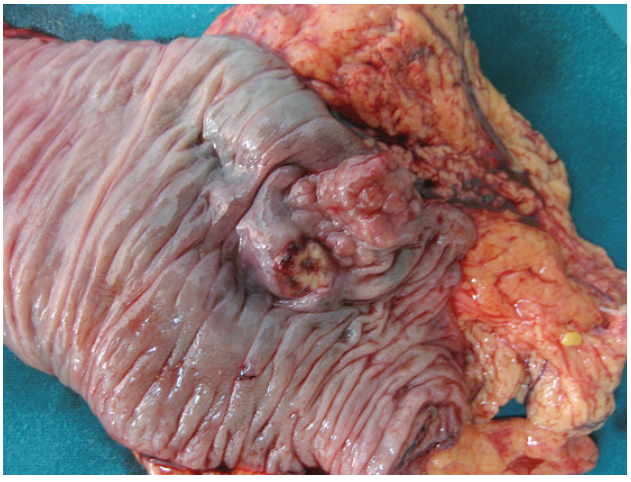

Figure 1. Cavernous hemangioma shown with resected colon.

DISCUSSION

Hemangiomas account for up to 10% of all benign small intestinal tumors, and many varieties of histological and clinical types are described. Capillary and cavernomatous subtypes are the most frequent, but colonic localization is very rare. When these tumors are located in multiple organs, the patient suffers hemangiomatosis (4, 5). When hemangiomatosis of the colon exists, the submucosal vascular network is affected. Many dilated, thin-walled and irregular blood-filled spaces, mainly located within the mucosa and submucosa, are affected by the hemangioma. According to the most commonly used classification, which combines the size and type of blood vessel affected, hemangiomas are different from arteriovenous malformations, which consist predominantly of dilated mucosal capillaries communicating with tortuous submucosal veins, are more common with age, and are primarily in the right colon (up to 80%) (5). Incidence of gastrointestinal angioma is reported as 0.3%, and these tumors account for about 5-10% of all benign intestinal tumors (6).

Patients clinically refer with recurrent, painless rectal bleeding, and anemia is also a common symptom in 50% of the patients, as in our patient (7). Obstruction is reported in about 20% of the patients. In 10% of the patients, no symptoms are noted (2). Intussusception of the colon owing to colonic hemangioma has also been reported, but this clinical presentation is very rare (8). There is no difference between males and females (4).

Differential diagnosis includes adenomatous polyps, carcinoma and hemorrhoids (9), and cavernous hemangioma must also be differentiated from arteriovenous malformations such as angiodysplasia and vascular ectasia. Colonic hemangiomas, when present, are more often located in the rectosigmoid area (7), in contrast with angiodysplasia. Transverse colon, as in our case, is a rare location for these tumors. Additionally, when the patient is affected by diffuse colonic hemangiomatosis, Kasabach-Merritt syndrome must be suspected even without cutaneous manifestations. Complications like severe anemia, massive rectal bleeding, vessel compression or even pelvic organ infiltration can occur (10).

Figure 2. Section of colonic wall demonstrates abnormal vascular structure of the cavernous hemangioma involving submucosa and muscularis propria.

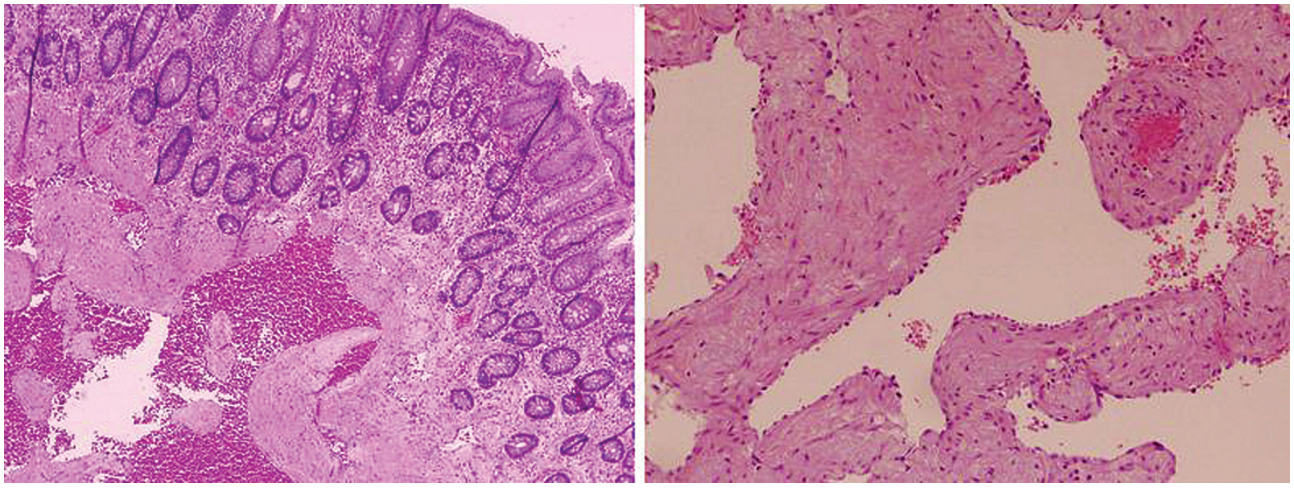

Figure 3. The cavernous hemangioma is composed of blood-filled sinus-like spaces and supported by connective tissue in the submucosa (left: hematoxylin and eosin (HE), 4x; right: HE, 10x).

Colonoscopy must be performed to rule out a malignancy or other problem. Elevated blue nodular lesions or dilated vessels are characteristic findings in the colon wall. Sometimes, however, these lesions are hard to recognize, as in our case. Biopsy should not be performed because of the high bleeding risk, as in our case, but some authors have reported its use for resection of the lesion in selected patients such as the elderly (11). Abdominal radiographs in 25 to 50% of patients can show the image of a phlebolith. These images are considered a pathognomonic finding (9). Barium contrast examination is not specific and can show signs such as large polypoid or obstructing lesions that may change their configuration after distention or obstruction, and those signs could suggest the possibility of vascular tumor (12, 13).

CT scan is very useful but MRI seems most accurate in diagnosis and is best for pre-operative planning (10). CT scans can show the phleboliths, and give important information about hemangioma extent, invasion and extraintestinal involvement, such as pelvic invasion.

Because colonoscopy with endoscopic biopsy could be negative, MRI features seem valuable and specific enough to make it a non-invasive and accurate diagnostic tool especially (12). MRI has also been described as an important diagnostic procedure (3). MRI can characteristically show bright signal intensity on T2-weighted images and intermediate signal intensity on T1-weighted images, and blood vessels and calcifications appear with a signal voided on T1- and T2-weighted images. MRI allows good evaluation of the bowel wall extent and visualization of the colonic locations. Signal intensity of these lesions as shown on MR images is more specific than that of any CT scan image. Depiction of phleboliths by MRI is seen to be poor, whereas they are easily seen by CT scan (12).

Elective treatment should be performed and complete resection of the hemangioma is the only curative method (14). A good exploration of the abdominal cavity should be performed because of extracolonic organ involvement (12). Other treatments such as sclerotherapy, electrocautery, radium implantation or cryosurgery have been described, but those are non-operative techniques and provide only temporary good outcomes. Only angiography and embolization can be used in cases of acute bleeding, but bleeding recurrence is a common issue (10).

In summary, cavernous hemangioma of the transverse colon is an uncommon vascular lesion. They are more frequently located in the rectosigmoid colon, and they usually present with painless rectal bleeding. Endoscopy is the most important for diagnostic exploration and usually shows some characteristic findings. The potential presence of extracolonic hemangiomatosis has to be suspected in patients with cavernous hemangioma of the colon, even without cutaneous lesions. Surgery is the recommended treatment.

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