Giant Hemangioma of the Rectum: a case report

WAI-YIP LAW  CHIN-CHU WU  LIANG-KUANG CHEN  CHENG-TAU SU

Department of Diagnostic Radiology, Shin Kong Wu Ho-Su Memorial Hospital

Although vascular malformations have been found in every organ, hemangioma of the colon and rectum are rare. Misdiagnosis often occurs because of lack of awareness of classic clinical features. We report a case of hemangioma involving the rectum. This 17-years-old man presented with intermittent abdominal pain for one year. CT scanning revealed a large mass occupies the lower abdomen and pelvic cavity. A nonhomogeneous and subtle enhancement of the lesion was noticed after contrast administration.

Key words: Hemangioma; Rectum, CT; Rectum, Neoplasms

Gastrointestinal hemangiomas are uncommon benign vascular tumors that may occur anywhere in the gastrointestinal tract. The colon is the second most common site of gastrointestinal hemangiomas, and the rectosigmoid is the most commonly involved colonic segment [1]. Most patients with hemangiomas of the colon are young men. Misdiagnosis often occurs because of lack of awareness of classic clinical features. Endoscopy, plain x-ray abdomen, barium enema, CT scan, MRI and selective angiography are useful means of investigation for accurate diagnosis [2, 3, 4]. Here we report a case of 17-years-old young man with huge solitary hemangioma of rectum. After surgical intervention, the patient recovered without any complication.

CASE REPORT

A 17 years old male patient presented with the history of intermittent abdominal pain at right lower quadrant since one year ago. The pain was dull in character and was always associated with fever and chills in each event. He ever went to clinic for help with symptomatic remission after empirical treatment, whereas no definite diagnosis was achieved. His condition was relative well in between these events; neither body weight loss, bowel habit change, hematochezia, nor melena was found. He was sent to the emergency room of our hospital due to the symptoms attacked again.

Physical examination revealed a huge abdominal mass at the lower abdominal area. Laboratory data revealed hemoglobin of 10.2 g/ml and leukocytosis with white blood cell count of 14830/dl. Other biochemical and coagulation parameters were within normal limits, and the stool occult blood test showed negative. Ultrasonography showed a huge lower abdominal mass with mixed echogenicity and multiple tubular structures without significant Doppler signal. A plain radiograph of the abdomen (Fig. 1) showed space-taking lesion occupied in the pelvic cavity with displacement of the bowel loops. Computed tomography of whole abdomen

Reprint requests to: Dr. Liang-Kuang Chen
Department of Diagnostic Radiology, Shin Kong Wu Ho-Su Memorial Hospital.
No. 95, Wen Chang Road, Taipei 111, Taiwan, R.O.C.
(Fig. 2) revealed a well-defined mass lesion measuring about 18cm x 15cm x 10cm in size in the pelvic cavity, and a nonhomogeneous and subtle enhancement of the lesion after contrast administration was found. On the next day after admission, sono-guided biopsy was arranged to obtain a definite diagnosis. Episodes of painless bright-red rectal bleeding occurred after this procedure and substantial drop of hemoglobin from 10.2 to 6.8 g/ml was found. On the 3rd hospital day, repeated ultrasonography was performed, demonstrating ascites and aspiration obtained non-clotted bloody fluid. Moreover, dyspnea occurred progressively and chest film revealed increased pulmonary infiltration over bilateral lung fields. Laboratory data and automated chemistry analysis indicated metabolic acidosis. Under the impression of internal bleeding, an emergent exploratory laparotomy was done. Using an anterior approach, an expansive cavernous hemangioma of the rectum was revealed. The distal sigmoid colon and rectum were excised (Fig. 3), with preservation of the anal sphincters. A temporary colostomy was closed after three months. The patient had no further hematochezia and continued to enjoy full rectal continence.

**DISCUSSION**

Hemangiomas are hamartomatous vascular growths that can be found throughout the gastrointestinal tract. The lesions appear at birth, or shortly after birth, and then enlarge with normal organ growth [3]. They may be of the capillary or cavernous type. Approximately 50% of all reported colonic hemangiomas have been described as the cavernous variety [5]. Lesions may be single or multiple and may be associated with hemangiomas in the liver, pancreas, and gallbladder or on the skin [1-7]. Colonic hemangiomas are uncommon, with most symptomatic tumors arising distally in the rectum and rectosigmoid. Hemangiomas usually present in young men and women, often in the third decade of life. A hereditary predisposition usually is not observed, although some familial cases have been reported [5].
Capillary hemangiomas of the colon are often asymptomatic. In contrast, cavernous tumors frequently bleed briskly early in life, and present with recurrent passage of bloody stools. The bleeding may be slow and insidious or massive and life threatening [8]. Clinically, bleeding from colonic hemangiomas is usually slow, producing occult blood loss with anemia or melena. Hematochezia is less common, except in the case of large cavernous hemangiomas of the rectum, which can cause massive hemorrhage. Expansive cavernous hemangiomas may infiltrate organs, such as the bladder or uterus that lie in anatomical proximity to the colorectum. Misdiagnosis often occurs due to the lack of specific clinical features. Hemangiomas have been frequently mistaken for internal hemorrhoids, carcinoma, inflammatory bowel disease, adenomatous polyps, and other conditions [1, 2, 4, 7, 9].

The presence of phleboliths is common in colorectal hemangiomas and is a useful sign in young patients. Abdominal phleboliths are normally located within the venous plexuses of the uterine broad ligament, urinary bladder, prostate and associated structures, and the spleen. Phleboliths that occur in clusters and those that have an atypical distribution within the pelvis should raise concern for a hemangioma. Fifty percent of adults with intestinal hemangiomas are noted on plain films to have clusters of phlebolith [1, 2, 5, 6, 8, 9].

Soft, serpentine masses, polypoid lesions, and circumferential lesions may be seen on barium studies; some patients may have features of rigid luminal narrowing, scalloping and rigidity of the colonic wall, particularly in the rectum and rectosigmoid. Colonic mucosa may be intact or inflammed [9]. The retrorectal space may be widened.

CT scanning may show a transmural thickening of the involved segment, intramural and extramural phleboliths, vascular engorgement within the mesentery, and extrarectal lesions [9]. Moreover, CT scanning provides information about the true dimensions of the tumor and involvement of adjacent structures, which facilitate preoperative preparation. The nonhomogeneous enhancement of hemangioma after contrast administration may reflect the presence of spaces filled with small veins within the tumor. Subtle enhancement of this lesion may be due to fulfilled thrombus inside. Delay phase scanning is not suggested because no specific enhanced pattern is beneficial for diagnosis. Poor definition of the margins of the lesion indicates infiltration. Oral contrast medium should not be given before scanning as it may obscure a gastrointestinal angioma [3, 4].

MRI shows a markedly thickened rectosigmoid wall of very high signal intensity on T2-weighted images, which may result from slow flow in the vascular malformation and is considered to be a highly specific finding. Perirectal fat is also of very high signal intensity on T2-weighted images and exhibits heterogeneity related to the serpiginous vascular structures.

Mesenteric arteriography is successful in identifying large cavernous lesions in two thirds of cases but is rarely necessary to establish the diagnosis. A puddling of contrast in the venous phase is a typical finding. Visceral angiography is useful in excluding coexisting hemangiomas at other sites of the gastrointestinal tract.

On endoscopic examination, visible nodular masses are soft, compressible, and range in color from deep blue to dull red. Ulcers and signs of proctitis may be evident. Biopsy of a suspected hemangioma can be dangerous because of subsequent severe hemorrhage [3, 7].

Surgical treatment of colorectal lesions is usually necessitated by the severity of hemorrhagic symptoms [8, 9]. Alternative forms of therapeutic approaches have included injection sclerotherapy directly into the tumor, snare polypectomy with electrocautery, arterial embolization to control active bleeding, and fractionated irradiation [8, 9]. Ultimately, complete surgical excision of the rectum is required.

Reviewing the clinical histories and radiological manifestations, there was no episodic rectal bleeding occurred in our patient before the biopsy was performed, although gastrointestinal painless bleeding is the most common clinical presentation [1-9]. Very large amount of blood clots fulfilled within the tumor and was identified by operative findings. Thus, the presence of anemia in our patient may be caused by episodes of intramural tumor bleeding.

Symptoms of fever, chills and leukocytosis had rarely been documented in the literature, although ulcerations and proctitis may be observed by endoscopy. We inferred it might occur due to tumor necrosis, infection, or acute hemorrhage. The differential diagnosis of colonic hemangioma includes some inflammatory and infectious conditions. The chronic bleeding due to hemangioma is usually painless, whereas most of the inflammatory bowel diseases are associated with pain and abnormal bowel movement [6]. The presence of phleboliths is common in colorectal hemangiomas and is a useful sign in young patients but was absent in our case. Biopsy may establish a definite diagnosis of hemangioma, but it may result in profuse hemorrhage and fatal consequences may occur.
REFERENCES


直腸血管瘤：病例報告

羅偉業  吳金珠  陳良光  蘇誠道
新光吳火獅紀念醫院  放射診斷科

血管瘤為良性腫瘤，可發生於許多器官當中，惟發生於結腸直腸者屬少數；由於沒有典型之臨床症狀，往往會被忽略而導致誤診。我們在此提出一病例報告：一名17歲男性病患主訴於一年前開始出現偶發性之腹部疼痛。電腦斷層攝影發現骨盤腔內有一巨大腫瘤，於靜脈注射顯影劑後表現微弱不均勻之顯影形態。

關鍵詞：血管瘤；直腸，電腦斷層攝影；直腸腫瘤