

# Infiltrating rectal cavernous hemangioma mimicking rectal tumor

*Rektal tümörü taklit eden infiltratif rektal kavernöz hemanjiyom*

*To the Editor,*

Tumors of the rectum can be primary or metastatic, as observed with the other organs. Primary cancer of the rectum is not rare and accounts for one-third of all cases of colorectal cancer. Invasion of a cancer originating from other pelvic organs might also be seen. Beyond malignant diseases, rectal polyps are reported with a prevalence of 7-50% in the general population, especially in older patients (1). Congenital and developmental cysts, diffuse cavernous hemangioma, infiltrating forms of endometriosis, and lesions secondary to inflammatory processes may be found in the rectum as well. Diffuse cavernous hemangioma is a rare, benign vascular malformation. It consists of a network of vascular structures located in the intestinal wall, but it can also infiltrate the surrounding connective tissues. Diagnosis of rectal hemangioma is very important because of its tendency to cause massive rectal bleeding that may be life-threatening (2). We describe a patient with infiltrating cavernous hemangioma of the rectum, which mimicked a malignant process. A 50-year-old male patient presented with abdominal distention and lack of appetite; no history of rectal bleeding was defined. Physical examination was normal except for a nodular lesion in the anterior wall of the rectum. Thereafter, an abdominal computed tomography (CT) was performed, which demonstrated a mass causing asymmetric wall thickening in a 5 cm-long segment and invading the connective tissue in the mesorectal and ischiorectal fossa (Figure 1). Additional findings in the abdominal CT were deep inguinal enlarged lymph nodes on the left side, but no sign of vessel thrombosis or pelvic phleboliths. The presence of phleboliths is common in colorectal hemangiomas and is a useful sign in patients, but was absent in our case. According to these findings, pelvic magnetic resonance imaging (MRI) and endoscopic examination were recommended.

Endoscopy of the rectum showed no sign of a mucosal lesion, but revealed a nodular mass thought to be localized in the submucosa in a 6-7 cm segment of the rectal wall. The pelvic MRI of the patient revealed that the mass was tubular with low vascularity. The mass infiltrated the pelvis deeply, causing partial invasion of the left rectal wall and extending to the left gluteal muscular structures (Figure 2).

The differential diagnosis of the mass included plexiform neurofibroma, angiofibroma and cavernous hemangioma, and biopsy for histopathologic examination was suggested. Hence, a fine needle aspiration biopsy was performed, and the pathologic examination revealed fibroadipose tissue, which was insufficient for the diagnosis. The mass was resected with abdominopelvic approach.

Pathology result of the surgically removed mass was diffuse cavernous hemangioma. The patient has been followed for two years with colostomy, and there have been no further complaints. Follow-up CTs demonstrated the residual mass.

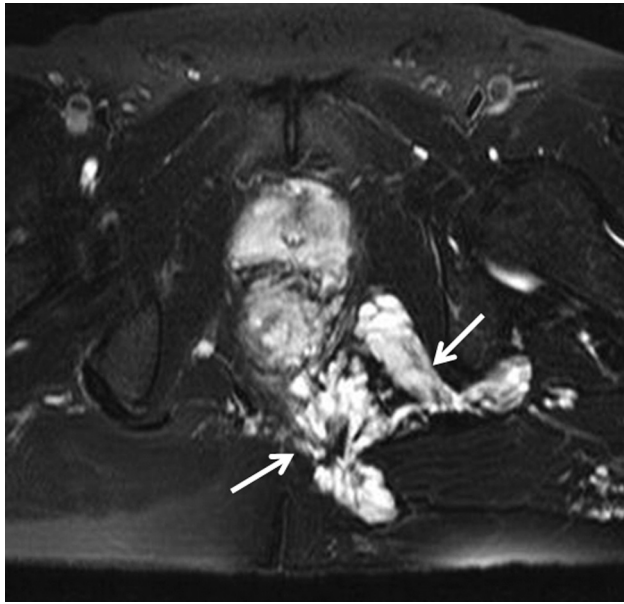


**Figure 1.** CT showed a mass causing asymmetric wall thickening in a 5 cm-long segment and invading the connective tissue in the mesorectal and ischiorectal fossa.

**Address for correspondence:** Yakup YEŞİLKAYA  
Hacettepe University Hospital, Department of Radiology,  
Ankara, Turkey  
E-mail: dryakup23@hotmail.com

**Manuscript received:** 01.11.2010 **Accepted:** 18.02.2011

*doi:* 10.4318/tjg.2012.0336



**Figure 2.** The T2-weighted image showed the high-signal-intensity mass infiltrating the pelvis deeply, causing partial invasion of the left rectal wall and extending to the left gluteal muscular structures.

Diffuse cavernous hemangioma, which is a benign vascular malformation of the gastrointestinal tract, is most commonly presented with recurrent, painless rectal bleeding. It consists of numerous dilated vascular spaces, with thin walls, mainly located within the mucosal and submucosal layers, but it may extend through the other layers of the intestinal wall, including the muscular layer and the serosa; even infiltration of the connective tissues or the pelvic muscles can be seen.

Because of its presentation features, the physical

examination findings and pelvic infiltration in some cases, most patients undergo surgery due to misdiagnosis. Colorectal malignancies, inflammatory bowel diseases, rectal polyps, and internal hemorrhoids are lesions that may be included in the differential diagnosis. Misdiagnosis leads to erroneous therapy (3). The signal intensity of colorectal tumors, both malignant and benign, on MRI is similar to the bowel wall, slightly increased on T2- and decreased on T1-weighted images. The main features of inflammatory bowel diseases on MRI are reported contrast enhancement on T1-weighted images as active inflammation and use of T2-weighted imaging of the bowel wall and mesentery, both with fat saturation (4,5). In the cases with suspicion of diffuse cavernous hemangioma, MRI of the pelvis is recommended because of its excellent soft-tissue contrast and multiplanar imaging capability, which enables not only characterization of the cavernous hemangioma but also its differentiation from the other disorders of the rectal wall (2). The MRI features of diffuse cavernous hemangiomas are as follows: high signal intensity on T2-weighted images, intermediate signal intensity on T1-weighted images, and high signal intensity heterogeneous perirectal fatty tissue with enhancing serpiginous structures, which represents small vessels supplying the vascular malformation. While thrombosed vessels have a high signal intensity, calcified regions of the lesion and blood vessels are seen as signal voids (3,6). While biopsy may establish a definite diagnosis of hemangioma, it can result in profuse hemorrhage and even have fatal consequences.

## REFERENCES

1. Silva AC, Vens EA, Hara AK, et al. Evaluation of benign and malignant rectal lesions with CT colonography and endoscopic correlation. *Radiographics* 2006; 26: 1085-99.
2. Hoeffel CC, Azizi L, Mourra N, et al. MRI of rectal disorders. *AJR* 2006; 187: W275-W284.
3. Topalak O, Gönen C, Obuz F, et al. Diffuse cavernous hemangioma of the rectosigmoid colon with extraintestinal involvement. *Turk J Gastroenterol* 2006; 17: 308-12.
4. Jardine VL, Sala E, Lomas DJ. MR colonography: baseline appearance of the unprepared rectosigmoid. *BJR* 2005; 78: 202-6.
5. Lauenstein TC. MRI of inflammatory bowel disease. *Applied Radiol* 2008; 19-24.
6. Djouhri H, Arrivé L, Bouras T, et al. Diffuse cavernous hemangioma of the rectosigmoid colon: imaging findings. *J Comput Assist Tomogr* 1998; 22: 851-5.

Yakup YEŞİLKAYA, Mustafa HİZAL, Deniz AKATA

Department of Radiology, Hacettepe University School of Medicine, Ankara