



SCIENTIFIC LETTER

Spontaneous colonic perforation of a cavernous hemangioma during colonoscopy

Perforación colónica espontánea de un hemangioma cavernoso durante una colonoscopia

Cavernous hemangiomas of the colon (CHC) are very infrequent benign vascular lesions that commonly affect the rectosigmoid junction.¹ CHC was described in 1839 and the pathogenesis associated with these lesions is not fully understood. One possible explanation is that CHC derives from defects related to growth factors and endothelial cells of the mesodermal tissue. About 80% of extensive CHC are located in the rectum and sigmoid colon.² Clinical manifestations associated with CHC range from recurrent painless rectal bleeding to massive hemorrhage causing life threatening hemodynamic instability.³ Spontaneous perforations during colonoscopy have not been described as a complication of CHC. We describe a case of spontaneous colonic perforation of CHC during a diagnostic colonoscopy.

A 76-year-old white man consulted for hypogastric pain and recent change in bowel movements. Diagnostic colonoscopy was performed using insufflation with carbon dioxide. During the procedure, blood clots were observed in the right colon. Upon arrival to the cecum, an irregular, ulcerated, friable lesion with spontaneous bleeding was observed (Fig. 1A). No hyperinflation was carried out. No biopsies were performed and the procedure was immediately suspended because abdominal distension



was observed, with abnormal abdominal exploration. The patient presented hemodynamic stability during the procedure. Laboratory test were within normal limits. Abdominal CT was performed showing pneumoperitoneum and abnormal thickening of the cecum fundus without regional lymph nodes (Fig. 1B). Right colectomy with ileotransverse anastomosis was performed and the patient was discharged after 12 days of uncomplicated hospitalization. Pathology final diagnosis showed ulcerated CHC located in the cecum with transmural perforation (Fig. 1C). The patient presented an uncomplicated follow-up 6 months after surgery.

We report on a case of spontaneous perforation of CHC during a diagnostic colonoscopy. To the best of our knowledge, this is the first case report of this complication in patients with CHC. These lesions usually are located in rectum and sigmoid colon.¹ Few publications had described complications related to CHC, being bleeding the most frequent. In our report, the patient complained of abdominal pain and change in bowel movements, both clinical manifestations of CHC have not been described previously in these patients, although these two clinical manifestations are unspecific. Involvement of ileocecal valve with partial obstruction is frequently present in patients with inflammatory bowel disease and could explain manifestations such as bowel movements modification and abdominal pain.⁴

Perforation during diagnostic colonoscopy is a very rare complication. The rate of perforation in diagnostic colonoscopy ranges from 0.022% to 0.268%.⁵ The most frequent factors involved in cases of perforation of the cecum are the use of thermal energy or polypectomy. Spontaneous cecal perforation during diagnostic colonoscopy is an infrequent complication. Usually, this complication is related to

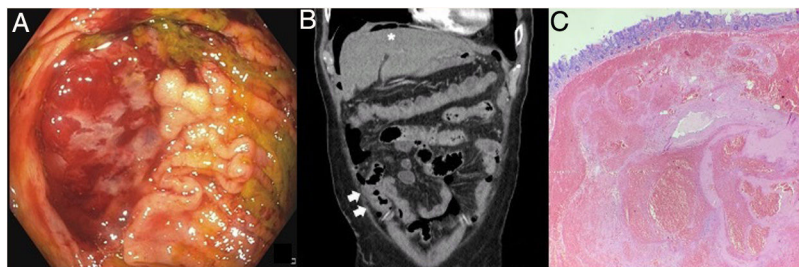


Figure 1 (A) Cavernous hemangioma located in the cecum without endoscopic signs of perforation. (B) Abdominal TC showing thickening of the colonic wall (arrow) and pneumoperitoneum as manifestation of colonic perforation (asterisk). (C) Medium and large caliber vascular ectasia affecting all cecum layers, with thrombosis and recanalization signs in large vessels (HE 100 \times).

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the presence of abnormal findings in the cecum as neoplasm or severe colitis, due to the friability of the intestinal wall and insufflation.⁴

There are very scarce descriptions about clinical outcomes after severe complications associated with CHC. Some of them mentioned severe bleeding with high requirement of transfusion and need of surgery. In the present case surgical resolution was uncomplicated during follow up.

In conclusion, we described an unfrequented localization of CHC with spontaneous cecal perforation during diagnostic colonoscopy. Similar descriptions are needed to fully describe clinical presentations of CHC, and the possibility of being a risk factor for complications when performing colonoscopy.

Authors' contribution

María Florencia Álvarez and Domingo Cesar Balderramo wrote the manuscript. All authors approved the submitted version.

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Conflict of interest

None of the authors have any potential conflicts (financial, professional, or personal) to disclosure.

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