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Cartas al Director

Laparoscopic management of sigmoid colon intussusception caused by a malignant tumor: case report

Palabras clave: Laparoscopia. Intususcepción. Cáncer de colon.

Key words: Laparoscopy. Intussusception. Colon cancer.

Dear Editor:

Adult intussusception is a relatively rare condition. It accounts for 1% of patients with bowel obstruction and 5-10% of all intussusceptions. We describe a case of adult intussusception of the sigmoid colon caused by malignancy which was successfully treated by laparoscopic resection.

A 56-year-old man was admitted to our hospital with the chief complaint of bloody stools and tenesmus for 3 days. The patient was well before this admission. Digital rectal examination revealed a mass in the rectum about 7 cm proximal to the anal verge with fixation and irregular surface. All laboratory tests, including the tumor markers, were within normal limits. Colonoscopy revealed a huge fungating tumor located at 12 cm from anal verge leading to nearly completely obstruct the lumen. Ultrasound demonstrated a target lesion over the sigmoid colon area with concentric rings of alternating hypoechoic and hyperechoic layers with echogenic center and the "pseudokidney sign" on the longitudinal view (Fig. 1). Coronal magnetic resonance image (MRI) of abdomen displayed an intussusception mainly from the proximal sigmoid colon invaginated into the rectum with total length about 16 cm (Fig. 2).

Sigmoidorectal intussusception due to a sigmoid colon tumor was impressed. Surgical treatment was suggested, and the patient requested laparoscopic resection. At laparoscopy, the sigmoid colon was found to be intussuscepted into the rectum. Mobilization and reduction of the sigmoid colon was performed intracorporeally, and the mesentery was divided using Harmonic scalpel and endoclips. Reanastomosis of colon and rectum was then carried out after resection of the sigmoid colon tumor which was 40 cm far from the anal verge. The patient's postoperative course was uneventful, and the cosmetic result was excellent. The patient was discharged 8 days after surgery on a diet as tolerated and returned to all activities of daily living 1 week later.

Fig. 1. Ultrasound demonstrates the "pseudokidney sign" on the longitudinal view.

Organic lesions usually result in adult intussusception whereas most pediatric intussusception is idiopathic. A 63-87% of colonic intussusceptions in adults are caused by malignant tumors and 29-33% by benign tumors (1). Most of the benign etiologies are lipoma and adenoma (2). In a review of 32 adults with colonic intussusception due to malignant tumors reported in Japan over a 10-year period, 14 cases were located in the sigmoid colon.

There are many tools to diagnose colonic intussusception. The characteristic appearance of barium enema is "a cup-shaped filling defect" or "a spiral or coil-spring appearance" (3). Colonoscopy may rule out organic lesions and provide biopsy route. The ultrasonic findings include the "target" and "doughnut" signs on

Fig. 2. MRI shows an intussusception mainly from the proximal sigmoid colon invaginated into the rectum with total length about 16 cm.

the transverse view and the "pseudokidney sign" on the longitudinal view (4). The characteristic findings of CT scan include "target sign" or "sausage-shaped appearance", and some authors state that the CT scan is most useful in making the diagnosis of intussusception (3). The coronal view of MRI shows the length of intussusception and displays the leading point anatomically.

The optimal treatment of adult intussusception is not universally agreed upon. Most cases of colon intussusception should not be reduced before resection because they most likely represent a primary adenocarcinoma. Conventional open operation and laparoscopic surgery are choices of treatment modalities. Whereas laparoscopic management of intussusception caused by colonic lipoma has been reported (5), there are no other reports of this approach applied to intussusception caused by malignancy in the colon. Because of an improved cosmetic result, shorter hospital days and early return to work, the laparoscopic surgery is a safe and feasible method.

Chuang CH, Hsieh CB, Lin CH and Yu JC

Division of General Surgery. Department of Surgery. National Defense Medical Center. Tri-Service General Hospital. Taipei, Taiwan

References

1. Matsuda K, Suda K, Tamura K, Deguchi T, Yamazaki E, Yago H, et al. Surgical management of adult sigmoid colon intussusception caused by a malignant tumor: report of a case. Surg Today 2003; 33 (10): 768-71.
2. Matsuba Y, Mizuiri H, Murata T, Niimi K. Adult intussusception due to lymphangioma of the colon. J Gastroenterol 2003; 38 (2): 181-5 (Review).
3. Takeuchi K, Tsuzuki Y, Ando T, Sekihara M, Hara T, Kori T, et al. The diagnosis and treatment of adult intussusception. J Clin Gastroenterol 2003; 36 (1): 18-21.
4. Triantopoulou C, Vassilaki A, Filippou D, Velonakis S, Dervenis C, Koulentianos E. Adult ileocolic intussusception secondary to a submucosal cecal lipoma. Abdom Imaging 2004; 29 (4): 426-8. Epub 2004; 18.
5. Hackam DJ, Saibil F, Wilson S, Litwin D. Laparoscopic management of intussusception caused by colonic lipomata: A case report and review of the literature. Surg Laparosc Endosc 1996; 6 (2): 155-9.