Laparoscopic management of small-bowel intussusception in a 64-year-old female with ileal lipomas

Yi-Chung Hou, Po-Chu Lee, Jung-Jung Chang, Peng-Sheng Lai

Yi-Chung Hou, Po-Chu Lee, Jung-Jung Chang, Peng-Sheng Lai, Department of General Surgery, National Taiwan University Hospital, Yun-Lin Branch, Yun-Lin County 64041, Taiwan, China

Author contributions: Hou YC performed the surgical procedure and managed the patient; Lee PC and Chang JJ edited the manuscript and coordinated the submission; Lai PS carried out the literature search, performed the surgical procedure, and revised the manuscript for scientific content; all authors have read and approved the final version of the manuscript.

Correspondence to: Peng-Sheng Lai, MD, Department of General Surgery, National Taiwan University Hospital, Yun-Lin Branch, Yun-Lin County 64041, Taiwan, China.

yabu71@yahoo.com.tw

Telephone: +886-5-5323911 Fax: +886-5-537942

Received: August 8, 2011 Revised: August 22, 2012 Accepted: September 17, 2012 Published online: September 27, 2012

Abstract

A 64-year-old female patient presented with upper abdominal pain and vomiting. Ultrasonography showed a hyperchoic mass in the right lower abdomen and computed tomography showed a low-density mass with intestinal invagination. An emergency laparoscopic right-hemicolectomy was performed, and the resected specimen was found to contain three tumors, which were identified histopathologically as intestinal lipomas. Adult intussusception is relatively rare and difficult to be diagnosed, since most symptoms of adult intussusception are nonspecific. We report our clinical experience of the diagnosis and emergent laparoscopic surgery for an adult patient with intussusception.

© 2012 Baishideng. All rights reserved.

Key words: Adult; Ileus; Intussusception; Intestinal lipomas; Laparoscopy

Peer reviewers: Akira Tsunoda, MD, PhD, Professor, Department of Surgery, Kameda Medical Center 929 Higashi-cho, Kamogawa City, Chiba 296-8602, Japan; Yong-Song Guan, MD, PhD, Professor, Department of Oncology and Radiology, State Key Laboratory of Biotherapy, West China Hospital of Sichuan University, Chengdu 610041, Sichuan Province, China

Hou YC, Lee PC, Chang JJ, Lai PS. Laparoscopic management of small-bowel intussusception in a 64-year-old female with ileal lipomas. World J Gastrointest Surg 2012; 4(9): 220-222 Available from: URL: http://www.wjgnet.com/1948-9366/full/v4/i9/220.htm DOI: http://dx.doi.org/10.4240/wjgs.v4.i9.220

INTRODUCTION

Ileal lipomas are relative uncommon benign tumors of the gastrointestinal tract. Most ileal lipomas are asymptomatic and need no treatment. Lipomas larger than 2 cm might cause symptoms, such as bleeding, diarrhea or constipation, intestinal obstruction, and intussusceptions, and might be a cause of surgical emergencies[1-3]. Intussusception of the bowel in adults is uncommon. Adults generally present with nonspecific findings of variable duration. Diagnosis is based on radiologic or surgical findings. Abdominal echo and computerized tomography (CT) results can diagnose intussusception in most case. Laparoscopic surgery has its benefits in reducing incision size, postoperative pain, risk of hernia, and recovery time. In this report, we present a case with giant ileal lipomas causing ileal-colonic intussusception leading to emergent laparoscopic right hemicolectomy.

CASE REPORT

A 64-year-old female with a history of hypertension presented with sudden-onset upper abdominal pain that shifted to the right lower quadrant area with time. As the pain was progressive, the patient was sent to our emergency room 12 h later. She denied hunger pains, nausea, vomiting or diarrhea in recent days, and no radiation pain was noted. Physical examination showed...
Colon was readily movable. An extension incision was ligated the vessels using a note pusher. At this point, the identified by turning the mesocolon upwards. We then mobilizing the mesocolon, the ileocolic artery could be electrocautery, clipping the right colic vessels. After fully colon was taken down by lateral to medial approach with endo-ligasure and the hepatic flexure and ascending reflected posteriorly. The gastrocolic ligament was divided electrocautery and the duodenum was identified and re. Hence, we began with lateral to medial dissection. The be dilated, and ileocolic vessel torsion was observed, Under laparoscopic viewing, the intestine was found to change of the intussuscepted ileum, we decided to dissect it as a colon tumor rather than perform a reduction. Ultrasound showed a prominent swelling of the intestinal wall with target signs and a hyperchoic mass of 67 mm × 60 mm in size over the right lower quadrant area (Figure 1), and abdominal CT showed right ileocolic intussusception of the terminal ileum into the ascending colon with thickening of the bowel wall (Figure 2). Under the impression of intestinal lipoma-induced intussusception with terminal ileum ischemic change, the patient underwent emergency surgery. After the induction of general anesthesia, the patient was placed in a supine position. First, a skin incision was made above the umbilicus and a 12-mm trocar was inserted. Pneumoperitoneum was established by insufflation with carbon dioxide to an abdominal pressure of 15 mmHg. Under laparoscopic guidance, we then inserted. An abdominal plain X-ray showed no definite free gas and an air-fluid level was present over the left upper quadrant area, and under impression of ileus without a definite focus, we arranged further imaging study. Ultrasound showed a prominent swelling of the intestinal wall with target signs and a hyperchoic mass of 67 mm × 60 mm in size over the right lower quadrant area (Figure 1), and abdominal CT showed right ileocolic intussusception of the terminal ileum into the ascending colon with thickening of the bowel wall (Figure 2). Under the impression of intestinal lipoma-induced intussusception with terminal ileum ischemic change, the patient underwent emergency surgery. After the induction of general anesthesia, the patient was placed in a supine position. First, a skin incision was made above the umbilicus and a 12-mm trocar was inserted. Pneumoperitoneum was established by insufflation with carbon dioxide to an abdominal pressure of 15 mmHg. Under laparoscopic guidance, we then inserted three 5-mm trocars (left lower quadrant, right lower quadrant and right upper quadrant). Owing to necrotic change of the intussuscepted ileum, we decided to dissect it as a colon tumor rather than perform a reduction. Under laparoscopic viewing, the intestine was found to be dilated, and ileocolic vessel torsion was observed, rendering it difficult to start to divide the mesentery. Hence, we began with lateral to medial dissection. The peritoneal reflection of the right colon was divided using electrocautery and the duodenum was identified and reflected posteriorly. The gastrocolic ligament was divided with endo-ligasure and the hepatic flexure and ascending colon was taken down by lateral to medial approach with electrocautery, clipping the right colic vessels. After fully mobilizing the mesocolon, the ileocolic artery could be identified by turning the mesocolon upwards. We then ligated the vessels using a note pusher. At this point, the colon was readily movable. An extension incision was performed round the umbilicus port site of about 7 cm, through which the bowel was delivered. Approximately 10 cm of small intestine and another 30 cm ascending to include the intussusception tumor and intestine was resected, and an end-to-side ileocolostomy was created. The duration of the operation was 123 min. The macroscopic finding was intussusceptions with segmental ischemic change, secondary to multiple lipomas of ileum (Figure 3). The microscopic feature showed submucosal lipomas with focal mucosal necrosis (Figure 4). The patient had an uneventful recovery; she passed flatus on postoperative day (POD) 3, commenced oral fluids on POD 4, and was discharged on POD7.

**DISCUSSION**

In contrast to intussusception in pediatric patients, adult intussusception is relatively rare, accounting for only 5%-16% of all cases of intussusception[6]. Most symptoms of adult intussusception are nonspecific, unless bowel perforation or compromise occurs. The most common presenting symptoms of adult patients with intussusception are abdominal pain, vomiting, and bleeding[5]. The majority of adult intussusception in adult is due to an underlying lesion in the bowel lumen. Most intussusceptions arising in the small bowel are due to benign tumors, usually lipoma. Other causes of small bowel intussusception include malignant tumors, sarcoma, meckel’s diverticulum, chronic ulcer, adhesion, a heterotopic pancreas, and foreign body[6]. A number of different techniques have been reported to be useful in the diagnosis of intussusception. Contrast barium enema study, which is used in the pediatric population, is rarely used in adults and is not utilized to reduce the intussusception. Abdominal sonography may reveal target signs and pseudo-kidney signs[7]. Several reports have suggested that abdominal CT is an useful radiologic method for diagnosing intestinal intussus-ception[8-10]. On computed tomography scan, lipomas appear ovoid with absorption densities of -40 to -120 Hounsfield units, typical of fatty composition[11]. In our case, abdominal sonography showed swelling of intes-
tinal wall with target signs, and intussusception with gangrenous change was noted. Contrast barium enema study was not arranged owing to the risk of bowel perforation. CT showed ileocecal intussusception of the terminal ileum into the ascending colon with thickening of the bowel wall. There are some fat-density lesions in the lumen of terminal ileum, highly suspected terminal ileum lipoma induce intussusception.

Laparoscopy is valuable and is widely used in the diagnosis and management of abdominal emergencies. There are various advantages of laparoscopic surgery, such as a shorter hospital stay, shorter duration of postoperative narcotics use, and a decreased interval until return of bowel function and oral intake, with consequent psychological, cosmetic, and economic benefits. However, emergency operations have been associated with a significantly higher likelihood of morbidity and mortality. Abdominal distension with ileus limits the use of laparoscopic colon resection surgery. In this patient, we performed a right hemicolecetomy in preference to a segmental resection owing to an inability to preoperatively exclude the possibility of colonic malignancy. Because of the increased incidence of malignancy in colonic intussusception, several reports have suggested that this type of intussusception should be left unreduced and should be resected as a single mass.

In conclusion, laparoscopic surgery is beneficial for benign colon lesions such as lipomas even in some surgical emergency.

REFERENCES

1. Rogy MA, Mirza D, Berlakovich G, Winkelbauer F, Rauhs R. Submucous large-bowel lipomas—presentation and management. An 18-year study. Eur J Surg 1991; 157: 51-55
2. Pfeil SA, Weaver MG, Abdul-Karim FW, Yang P. Colonic lipomas: outcome of endoscopic removal. Gastrointest Endosc 1990; 36: 435-438
3. Vecchio R, Ferrara M, Mosca F, Ignoto A, Latteri F. Lipomas of the large bowel. Eur J Surg 1996; 162: 915-919
4. Begos DG, Sandor A, Modlin IM. The diagnosis and management of adult intussusception. Am J Surg 1997; 173: 88-94
5. Azar T, Berger DL. Adult intussusception. Ann Surg 1997; 226: 134-138
6. Gordon RS, O’Dell KB, Namon AJ, Becker LB. Intussusception in the adult—a rare disease. J Emerg Med 1991; 9: 337-342
7. Sofia S, Casali A, Bolondi L. Sonographic diagnosis of adult intussusception. Abdom Imaging 2001; 26: 483-486
8. Wang LT, Wu CC, Yu JC, Hsiao CW, Hsu CC, Jao SW. Clinical entity and treatment strategies for adult intussusceptions: 20 years’ experience. Dis Colon Rectum 2007; 50: 1941-1949
9. Huang WS, Changchien CS, Lu SN. Adult intussusception: a 12-year experience, with emphasis on etiology and analysis of risk factors. Chang Gung Med J 2000; 23: 284-290
10. Takeuchi K, Tsuzuki Y, Ando T, Sekihara M, Hara T, Kori T, Kuwano H. The diagnosis and treatment of adult intussusception. J Clin Gastroenterol 2003; 36: 18-21
11. Heiken JP, Forde KA, Gold RP. Computed tomography as a definitive method for diagnosing gastrointestinal lipomas. Radiology 1982; 142: 409-414
12. Golash V, Willson PD. Early laparoscopy as a routine procedure in the management of acute abdominal pain: a review of 1,320 patients. Surg Endosc 2005; 19: 882-885
13. Agresta F, Ciardo LF, Mazzarolo G, Michelet I, Orsi G, Trettin G, Bedin N. Peritonitis: laparoscopic approach. World J Emerg Surg 2006; 1: 9
14. Ates M, Coban S, Sevli S, Terzi A. The efficacy of laparoscopic surgery in patients with peritonitis. Surg Laparosc Endosc Percut Tech 2008; 18: 453-456
15. Favuzza J, Friel JC, Kelly JJ, Perugini R, Cournihan TC. Benefits of laparoscopic peritoneal lavage for complicated sigmoid diverticulitis. Int J Colorectal Dis 2009; 24: 797-801
16. Paton BL, Mostafa G, Lincourt AE, Kercher KW, Heniford BT. Profile and significance of emergency colorectal resections. Am Surg 2008; 74: 305-309
17. Barussaud M, Regenet N, Briennon X, de Kerviler B, Pessaux P, Kohnsh-Sharhi N, Lrhur PA, Hamy P, Leborgne J, le Neel JC, Mirallie E. Clinical spectrum and surgical approach of adult intussusceptions: a multicentric study. Int J Colorectal Dis 2006; 21: 834-839

S- Editor Wen LL | L- Editor A | E- Editor Xiong L