

Laparoscopic Surgery For Adult Bowel Intussusception: Report Of A Case

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Abstract

Intussusception in adults is a rare entity that it is generally caused by definable intraluminal pathology and for this reason surgical resection of intussusception is usually indicated. The preoperative diagnosis of intussusception is infrequent in the adult population. The majority of patients are brought to the operating room with the preoperative diagnosis of bowel obstruction and the surgeon discovers an intussusception intraoperatively. We report a case of adult small bowel intussusception diagnosed preoperatively by CT scan of the abdomen and treated with laparoscopic segmental bowel resection.

INTRODUCTION

Intussusception exists when a proximal segment of bowel (intussusceptum) telescopes into the lumen of the adjacent distal segment (intussusciens). This is a rare occurrence in adults; 1% of patients with bowel obstructions and 5% of all intussusceptions (1, 2). In contrast to intussusceptions in children, an organic lesion is found in 70% to 90% of cases in the adult population (3, 4, 5, 6). Intraluminal lesions alter normal bowel peristalsis and form leading edges for the intussusceptum. Although intussusceptions present acutely in children, adults may present with a variety of acute, intermittent, and chronic symptoms, thus making its preoperative diagnosis difficult. In fact, main symptoms usually are those of bowel obstruction and, consequently, intussusception often is misdiagnosed initially in the adult population. Computed tomography scanning of the abdomen is the most useful diagnostic radiologic method showing the characteristic "target" lesions. Surgical resection of the intussusception is the preferred treatment in adults, as almost half of both colonic and enteric intussusceptions are associated with malignancy and a definable pathologic lesion is found in 70% to 90 of all adult intussusceptions.

CASE REPORT

A 46-year-old otherwise healthy woman reported to the emergency room with the complaint of intermittent, "crampy" mid-epigastric and lower quadrants abdominal pain of six months' duration. The abdominal pain, which had been increasing in intensity, was associated during the last three days with nausea and persistent vomiting.

Her appetite was good but she reported a 6-kg weight loss during the previous 6 months. She was chronically constipated but there was no recent change in her bowel habits.

She also had a one-year history of recurrent "dyspepsia" with the occasional vomiting episode for which she had been extensively investigated. Two upper GI endoscopies and a colonoscopy were normal. Abdominal and pelvic US/scan and gynecological evaluation were also normal. A few months before admission she was seen by a psychiatrist following the loss of a close relative in a car accident, but only mild reactive depression had been diagnosed, and no treatment given. She had been treated with short courses of anxiolytics, pro-kinetics and proton pump inhibitors without benefit.

On clinical examination she appeared generally well and afebrile. Chest and heart were normal; her abdomen was slightly distended but soft, non-tender with no signs of peritoneal reaction. Bowel sounds were present and active. The patient's rectal examination revealed no masses and a stool guaiac test was negative.

Laboratory studies were normal. Chest-X-ray was normal; abdominal plain films showed only slight fecal loading in her sigmoid colon. An abdominal ultrasound was normal. Her symptoms persisted and two days after admission she underwent a CT scan of her abdomen-which showed a thickened loop of small bowel containing vascular elements in it, with the peculiar "target lesion", highly suggestive for

small bowel intussusception (Fig. 1; Fig. 2).

Figure 1



Figure 2



She was taken to theatre for emergency laparoscopy which confirmed the presence of a 35-cm long intussusception of the middle small bowel. The invagination was partially reduced using two soft grasping forceps (Fig. 3). The last remaining segment of bowel including the “lead point” of the intussusceptum was excised and a side-to-side laparoscopic intracorporeal anastomosis made between the

two ends; a few interrupted stitches were applied to complete the anastomosis.

Figure 3



The post-operative course was uneventful and the patient was discharged home on the 7th post-operative day.

Histology of the specimen showed a 10.5-cm segment of small bowel with a 3-cm sessile polyp (Fig. 4) covered by ulcerated mucosa and with final pathologic features of a benign lipoma.

Figure 4



DISCUSSION

Intussusception remains a rare condition in adults, representing 1% of bowel obstructions and 0.003% to 0.02% of all hospital admissions. Intussusceptions have been classified according to location^(3,7). The most common classification system divides intussusceptions into four categories: enteric, ileocolic, ileocecal, and colonic. In distinction to intussusceptions in children, adults have an organic lesion within the intussusception in 70% to 90% of

cases (_{3,4,5,6}) and 50% of both enteric and colonic intussusceptions are associated with malignancy. Adults present with a variety of symptoms that can be acute, intermittent, or chronic and for this reason preoperative diagnosis is usually very difficult.

A number of different radiologic methods have been described as useful in the diagnosis of intussusception: CT scan, barium studies, abdominal ultrasound, angiography and radio nucleotide studies. In different series (_{8, 9}) the abdominal CT scan has been proved to be the most useful with ultrasound being the second most accurate, with their characteristic “target mass” appearance. Angiographic (₁₀) and radionuclide (₁₁) studies have shown diagnostic efficacy but not often used nowadays to make diagnosis of intussusception. Barium studies, which are both the first diagnostic and therapeutic choice in children with presumed intussusception, are also quite accurate in diagnosing colonic lesions in adults (₁₂).

Treatment in the adult population is almost always surgical resection of the intussusception. Normally, resection without reduction avoids spillage of succus through accidental perforation during reduction and allows normal bowel to be used for the anastomosis. Colonic lesions are malignant approximately 50% of the time (_{8, 12}) and usually is very difficult to distinguish between colonic intussusceptions due to a benign or a malignant lesion. A formal resection along lymphatic drainage should be performed for all colonic intussusceptions.

CONCLUSION

In conclusion, intussusception is the invagination of a

segment of bowel into an adjacent segment. It occurs rarely in adults and has a variety of different presenting symptoms and varying duration of symptoms; the diagnosis of intussusception is therefore difficult to make before surgery.

Surgical resection of the intussusception is mandatory in the adult population. In our experience laparoscopic bowel resection has been a safe and feasible option in the treatment of adult intussusception.

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