

Idiopathic Adult Intussusception : A Case Report

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Adult intussusceptions account for 5–10% of all intussusception cases and are considered rare, whereas they are most commonly encountered in children. Among adult cases, idiopathic intussusceptions are pretty rare. A 36-year-old male was admitted to our hospital with abdominal pain. His body temperature was 37.0°C, the white blood cell count was 14,000/ μ l and CRP 0.01mg/dl. A standing abdominal X-ray showed slight niveau formation. Computed tomography demonstrated the multiple concentric ring sign. His condition deteriorated and a laparotomy was performed. Intraoperatively, a mass measuring six centimeters in diameter was seen in the left side of the hepatic flexure of the transverse colon. The diseased intestine was reduced with Hutchinson's maneuver. No lesions or malignancy were found, however an ileocecal resection was performed to prevent recurrence of the intussusception. The resected specimen showed congestion and wall thickening. Pathological examination of resected specimen showed marked congestion and hemorrhage with coagulation necrosis. The patient's postoperative course was uneventful and he was discharged from our hospital on the 10th postoperative day. After nineteen months' follow up, no recurrence of the intussusception has been seen. Reduction of the bowel followed by minimum bowel resection should be considered to prevent recurrence of the intussusception and to avoid short gut or adhesional ileus. (Kitakanto Med J 2012 ; 62 : 139~141)

Key words : Intussusception, Hutchinson's maneuver, bowel, adult, idiopathic

Introduction

Adult intussusceptions account for 5–10% of all intussusception cases and are considered rare, whereas they are most commonly encountered in children.^{1,2} Among adult cases, idiopathic intussusceptions are pretty rare. We herein present a case of idiopathic adult intussusception which was treated with reduction followed together with a bowel resection and review of the literature.

Case

A 36-year-old male was admitted to our hospital with abdominal pain. His body temperature was

37.0°C, and the white blood cell count was 14,000/ μ l and CRP 0.01mg/dl. CEA and interleukin 2 receptor values were within normal limits. A standing abdominal X-ray showed slight niveau formation (Fig. 1). Computed tomography (CT) demonstrated the multiple concentric ring sign, which suggested that the ileum had intussuscepted into the ascending colon (Fig. 2a, b). The patient's condition deteriorated and a laparotomy was performed. Intraoperatively, a mass measuring 6 cm in diameter was seen in the left side of the hepatic flexure of the transverse colon. The diseased intestine was reduced with Hutchinson's maneuver. No lesions or malignancy were found, however an ileocecal resection was performed to prevent recur-

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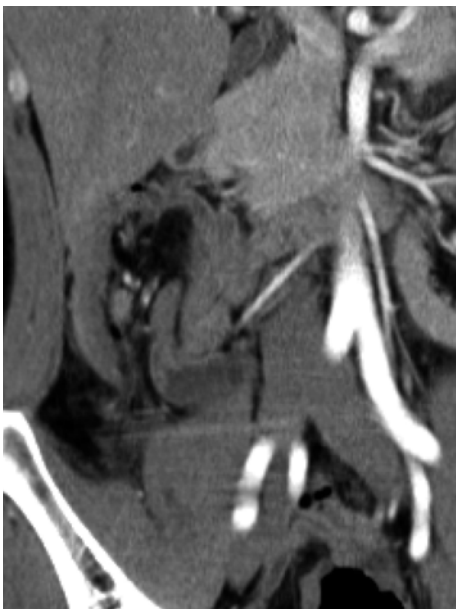
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Fig. 1 A standing abdominal X-ray showed slight niveau formation.



a



b

Fig. 2a, b Computed tomography demonstrated the multiple concentric ring sign (arrow heads). The arrow indicates the entrance of the ileum intussuscepted into the ascending colon.



Fig. 3 The resected specimen showed congestion and wall thickening.

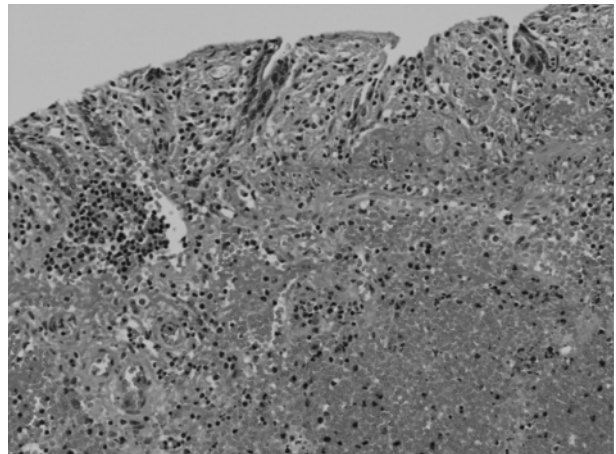


Fig. 4 Pathological examination of the resected specimen showed marked congestion and hemorrhage with coagulation necrosis (H&E, $\times 200$).

rence of the intussusception. Ileocolic reconstruction was achieved with a functional end-to-end anastomosis using Echelon 60 (Ethicon Endo-Surgery). The resected specimen showed congestion and wall thickening (Fig. 3). Pathological examination of the resected specimen showed marked congestion and hemorrhage with coagulation necrosis (Fig. 4). The mesenteric lymph nodes showed no malignancy. Finally, a diagnosis of idiopathic intussusception was made. The patient's postoperative course was uneventful and he was discharged from our hospital on the 10th postoperative day. After nineteen months' follow up, no recurrence of intussusception has been seen.

Discussion

Adult intussusception is rare, accounting for only 1–5% of all cases of adult bowel obstruction.³ Among intussusceptions in adults, idiopathic cases are pretty rare: 90% of adult intussusceptions have a lead point, whereas the remaining 10% are idiopathic.

The mean age for adult intussusceptions is almost the same in men and women. The most common symptom is abdominal pain, which occurs in 78 to 100% of cases including our patient, followed by nausea, vomiting, diarrhea, constipation, and rectal bleeding.⁴ The classic triad of abdominal mass, tenderness, and bloody discharge is rare.⁵ Adult intussusceptions in ileocolic lesions are typically caused by a pathologic lead point and frequently involve malignancy, commonly primary adenocarcinoma, which is the major cause of colonic intussusceptions, but are rarely diagnosed preoperatively. Idiopathic causes of adult intussusceptions are more likely to occur in the small intestine than in the colon. Chia suggest viral infection plays a role in intussusceptions based on the fact that three adult cases of intussusceptions were reported to be associated with enteroviruses occurring within a 3-week period.⁶ Plain X-ray is usually the initial imaging study, but CT is the first modality candidate for the investigation of patients suffering from prolonged abdominal pain.^{7,8} CT images of intussusception in adults present a characteristic mass lesion containing fat stripes in almost all cases including our patient, although this does not always help differentiate neoplastic lead points from a thickened bowel wall. On the other hand, magnetic resonance findings show a bowel-within-bowel appearance and coiled-spring appearance.⁹ When considering treatment, definitive surgical intervention is mandatory and preoperative reduction with barium or air, which is the first option for pediatric cases, is not recommended for adult intussusceptions. However, the optimal intraoperative treatment remains controversial: whether to resect the intussusception site en bloc or to reduce the intussusceptions first. Erkan et al advocate that colonic intussusceptions should be resected in an en-bloc manner without reduction due to the risk of perforation and spillage of micro-organisms and malignant cells, whereas cases of small intestinal intussusception can be reduced without complications unless there is strangulation.^{10,11} On the other hand, patients with ileo-colic and colonic intussusception without malignant lesions could be especially good candidates for nonoperative reduction prior to definitive surgery.¹² Others recommend performing colonoscopy at the time of laparotomy to determine the nature of the lesion and if found to be benign, these lesions could be reduced first with limited bowel resection as long as the bowel is viable to preserve the ileocecal valve and avoid diarrhea and ileus.^{13,14} In our case, ileocecal resection following bowel reduction was successfully chosen to prevent recurrence of the intussusceptions and to avoid short gut or adhesional ileus. According to Huang, there is no mortality due to intussusceptions except for

liver metastases of colon cancer. Leukocytosis and a shorter preoperative duration tend to increase the risk of complications.¹⁵ In any case, it is essential to establish the most appropriate surgical treatment strategy when an adult intussusception case is encountered.

In conclusion, adult idiopathic intussusception is pretty rare, and reduction of the bowel followed by minimum bowel resection should be considered to prevent recurrence of the intussusception and to avoid short gut or adhesional ileus.

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