Adult idiopathic ileocolic intussusception: A case report

Masaki Bannai, Antonio Pais

ABSTRACT

Introduction: Intussusception is a rare cause of acute abdomen in adults. Traditionally, management of adult intussusception has mandated surgical interventions due to a high incidence of malignant lesion resulting in intussusception. However, recent literature challenges the traditional view of mandatory surgical interventions for all adult intussusceptions due to an increasing number of benign and idiopathic cases. These benign and idiopathic cases of adult intussusceptions are more readily identified partly due to recent widespread use of computed tomography imaging technique. With the growing number of idiopathic cases, recent literature recommends against the traditional mandatory operative exploration of all adult intussusceptions, only advocating surgical interventions for selected cases.

Case Report: A 38-year-old female presented with an acute onset of severe right-sided abdominal pain with associated nausea, vomiting and rectal bleeding to our emergency department. Her computed tomography scan of abdomen and pelvis showed an ileocolic intussusception which had advanced to the level of the hepatic flexure without any mass lesion. The patient underwent an emergency ileocecal resection with side-to-side anastomosis of terminal ileum to ascending colon.

Conclusion: This case report adds to literature with evaluation of the rare form of adult intussusception without a lead point. There may be a role for a conservative management approach of subtypes with high incidence of primary malignant lesions in the absence of a lead point on a CT scan especially among young patients without any concerning features.

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an emergency ileocecal resection with side-to-side anastomosis of terminal ileum to ascending colon. **Conclusion:** This case report adds to literature with evaluation of the rare form of adult intussusception without a lead point. There may be a role for a conservative management approach of subtypes with high incidence of primary malignant lesions in the absence of a lead point on a CT scan especially among young patients without any concerning features.

Keywords: Adult idiopathic ileocolic intussusception, Rectal bleeding

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INTRODUCTION

Recent literature in adult intussusception discusses the increasing number of idiopathic cases and a role of non-operative management. Despite this new trend in opposition to the traditional school of thought of mandatory surgical intervention for managing adult intussusceptions, there have been few case reports of idiopathic adult ileocolic intussusception. We present a case of adult idiopathic ileocolic intussusception.

CASE REPORT

A 38-year-old female presented with past history of hypertension, depression, hysterectomy and three prior cesarean sections presented with an acute onset of severe right-sided abdominal pain with associated nausea, vomiting and rectal bleeding. She reported chronic diarrhea for three months without rectal bleeding or mucus before presentation. Her social history was significant for occasional intravenous drug use, with most recent use being the day before presentation. She was a current smoker and drank alcohol socially. She had no significant family history. On examination, her abdomen was soft with maximal tenderness in right lower quadrant. However, there was no palpable mass. Digital rectal examination showed small streak of blood on the glove. She had an elevated white blood cell count of $20.1 \times 10^9/L$ (reference range: $4.0-11.0 \times 10^9/L$) with neutrophilia of $16.41 \times 10^9/L$ (reference range: $2.00-8.00 \times 10^9/L$). Otherwise her baseline blood tests were unremarkable. A CT scan of abdomen showed a target lesion diagnostic of intussusception (Figure 1) which had advanced to the level of the hepatic flexure (Figure 2) associated with gross edema of the wall of the intussusceptum. However, a mass was not identified on the CT scan. The patient underwent an emergency lower midline laparotomy which confirmed ileocolic intussusception and had ileocecal resection with side to side anastomosis of terminal ileum to ascending colon.

The surgical specimen consisted of the cecum, 10 cm segment of the ascending colon and 3 cm segment of the terminal ileum. Sectioning of the specimen revealed bulging of the ileum into the caecum. The cecal mucosa adjacent to the ileocecal valve appeared congested and edematous with thickening of the bowel wall. The remaining large bowel mucosa and the small bowel mucosa grossly appeared unremarkable with no lesions. Microscopic examination of the specimen revealed congested ileocecal valve mucosa and the adjacent cecum with mucosal hemorrhage and necrosis. This segment showed marked edematous submucosa, and edematous and hemorrhagic muscularis propria. However, there was no evidence of a neoplastic lesion. The ascending colon showed enterocolic lymphocytic phlebitis and lymphocytic colitis. The findings were consistent with localized ischemic changes secondary to invagination. The postoperative course was unremarkable.

DISCUSSION

Intussusception is defined by telescoping of one segment of bowel into an adjacent segment of bowel. The clinical presentation in adult is often nonspecific, making diagnosis a challenge. Most commonly, patients present with abdominal pain [1–3]. The less common presentations include complete or partial bowel obstruction, heme-positive stools, a palpable mass and

Figure 1: Axial CT scan of abdomen demonstrating a “target lesion” diagnostic of intussusception.

Figure 2: Coronal CT scan of abdomen showing an ileocolic intussusception which advanced to the level of hepatic flexure.

incidental finding on imaging [1, 2]. The classic triad of abdominal pain, a palpable mass and passage of red currant jelly stools seen in children is rarely seen in adult patients [2]. Multiple diagnostic studies have been utilized to diagnose intussusception, including computed tomography (CT), ultrasound scan, small bowel contrast

study, and magnetic resonance imaging. Due to the rapid advancement in CT technology and widespread availability of CT in recent years, its utilization has increased over time [1]. Several recent studies have shown that current CT scanners have a sensitivity of 58–100% and specificity of 57–71% in detecting the intussusception [2, 4].

Most cases of intussusception in children are treated conservatively with non-operative reduction since this pathological process is usually idiopathic without any lead point. On the other hand, management of adult intussusception is more controversial. Firstly, adult intussusception is much less common in comparison to the incidence of pediatric cases, only accounting for 5% of all intussusceptions [5, 6]. Due to its rarity, there are no large-scale studies or meta-analyses published to define appropriate guidelines for optimal management of adult intussusception [1, 7]. Secondly, adult intussusceptions are often secondary to presence of a lead point, including malignancy. Previous studies have shown that the majority of adult colonic intussusception is associated with primary malignancy, representing 65–70% of cases, whereas 30–35% of adult small bowel intussusceptions are caused by a malignancy [6, 8]. As a result, most authors have previously recommended operative management for both diagnostic and therapeutic purposes [8].

Interestingly, more recent studies have shown a pathologic lead point has become increasingly less common in adult intussusception [1, 3, 9]. Amr et al. [1] have attributed this increase in identification of idiopathic cases partly due to widespread use of CT scans enabling the diagnosis of intussusception in patients without a lead point. In one recent study, idiopathic cases comprised 30% of adult intussusceptions as defined by absence of causes identified by various investigation modalities including imaging, exploration, and/or pathologic evaluation [2]. Recent studies support non-operative management for selected cases of intussusceptions, recommending against the traditional view of mandatory operative exploration of all intussusceptions [2, 9, 10]. Warshawer et al. [3] illustrated that all colocolonic and ileocolic intussusceptions in their study were associated with a neoplastic lead point whereas only 8 of 37 enteroenteric intussusceptions were secondary to neoplasm. In their study, the clinical follow-up revealed that patients managed conservatively did not have any alternative diagnoses. Hence, advocating that conservative management in younger patients with transient, short, small, and non-obstructing enteroenteric intussusception [3]. Furthermore, Amr et al. [1] have observed that there were only 24 patients with a recurrence in 315 patients during their follow-up period (mean follow-up period of 64 months). Though they did not differentiate the aetiology of recurrence or recurrence rate in each patient group with or without previous surgical exploration for the initial presentation, all of the recurrences were at the site of initial intussusception. Most of these recurrences involved small bowel (88%) and two were colocolonic and one was ileocecal, of which majority were treated

surgically [1]. They have suggested that increasing utilization of high-resolution CT facilitates the safe pursuit of non-operative management in patients without concerning symptoms or evidence of a lead point on CT [1].

Although recent literature has illustrated the increase in the number of idiopathic cases and advocated conservative management of adult intussusceptions, Onkendi et al. [2] have recommended surgical resection for colocolonic and ileocolic intussusceptions. Ileocolic intussusception was one of the least common subtypes of all intussusceptions among enteroenteric, ileocolic, ileocecal, and colocolonic intussusceptions in their study. Lead point associated intussusceptions in their study demonstrated about half of them were primary malignancies or metastases and the other half were benign lesions. They have advised resections for colocolonic and ileocolic intussusceptions due to higher incidence of primary malignant lesions in those subgroups [2].

Hence, management of subtypes of adult intussusceptions associated with high incidence of malignancy remains controversial. As this case report demonstrated, adult ileocolic intussusception can occur without any associated malignancy. However, management needs a careful consideration with size of intussusception and concerning symptoms such as obstructive symptoms, gastrointestinal bleeding, or a palpable mass. Therefore, there may be a role for conservative management approach even in subtypes with high incidence of primary malignant lesions like ileocolic intussusception in the absence of a lead point especially among young patients without any concerning features.

CONCLUSION

Though treatment options for adult ileocolic intussusceptions still remain controversial, there may be a role for conservative management. Further studies are required to establish an optimal management strategy and to further evaluate the safety of the conservative management.

Author Contributions

Masaki Bannai – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Antonio Pais – Substantial contributions to conception and design, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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