

## Case Report

# Laparoscopic management of colo-colonic intussusception, an uncommon cause of acute intestinal obstruction in adult: a case report

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### ABSTRACT

Colo-colonic intussusception is an uncommon cause of acute intestinal obstruction in adults. Traditionally open surgical methods were chosen as the primary form of treatment; however, few recent reports of successful treatment have been achieved with laparoscopic approach. We report a 44-year-old lady, who presented to accident and emergency department of our hospital with features of acute intestinal obstruction for two days. Ultrasonography and Contrast-enhanced computed tomography (CECT) of abdomen revealed colo-colonic intussusception. After resuscitation and optimization, patient underwent diagnostic laparoscopy which confirmed colo-colonic intussusception involving splenic flexure and proximal descending colon. Laparoscopic classical left hemicolectomy with stapled side to side colo-colonic anastomosis was done. Post-operative course was uneventful. Histopathology report confirmed presence of intraluminal hyperplastic polyp as lead point.

**Keywords:** Adult intussusception, Colo-colonic intussusception, Laparoscopic hemicolectomy

## INTRODUCTION

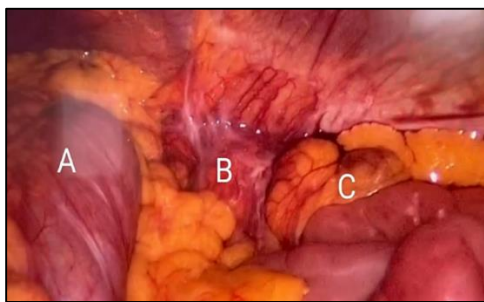
Intussusception is uncommon in adult population i.e. 5% of all intussusceptions and is responsible for 1% cases of intestinal obstruction.<sup>1</sup> Unlike childhood intussusception cases that are idiopathic, more than 90% of adult patients with intussusceptions have distinct causes or “lead points” that are related to bowel. Adult intussusception is more commonly caused by benign or malignant tumours and many colo-colonic cases are related to primary adenocarcinoma of the colon.<sup>2,3</sup> Surgery is traditionally considered the primary method of treatment and due to intestinal obstruction or ischemia, open surgical treatments were frequently considered the mainstay.<sup>3</sup> In recent years laparoscopic surgery has been demonstrated to be safe and feasible with additional advantage of being minimally invasive surgery.<sup>4,5</sup> We report successful laparoscopic management of a case of adult colo-colonic intussusception with underlying tumour as the lead point.

## CASE REPORT

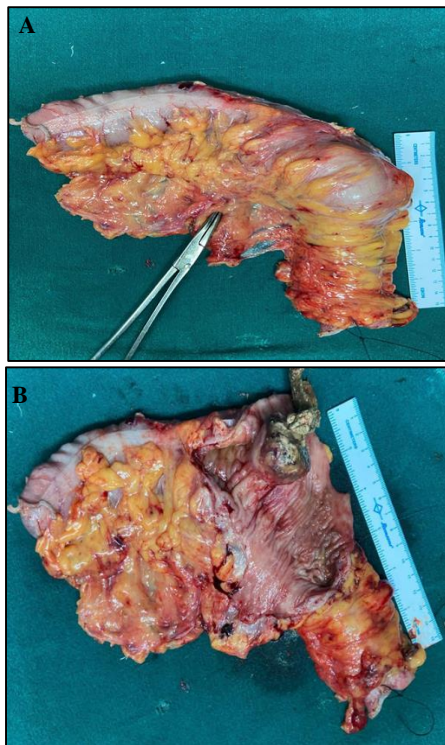
A 44-year old lady admitted to accident and emergency department of our hospital due to acute onset colicky abdominal pain and obstipation for two days with history of mucoid blood-tinged diarrhea alternating with constipation and weight loss for past two months for which she underwent colonoscopy at some other hospital which revealed solitary polypoidal soft tissue lesion in the descending colon with luminal narrowing. Physical examination revealed signs of dehydration, pallor and on per abdominal examination it was distended with mild tenderness and an ill-defined lump in left lumbar region.

Blood investigations showed low haemoglobin (9.0 gm/dl), mild leucocytosis with a slightly increased C-reactive protein level. Abdominal X-ray was suggestive of acute intestinal obstruction with dilated bowel loops and multiple air fluid levels. Abdominal sonography showed target sign suggestive of left colo-colonic

intussusception. Contrast-enhanced computed tomography (CECT) of abdomen revealed colo-colonic intussusception at splenic flexure with intraluminal polypoidal mass lesion likely to be lipoma as lead point. On the basis of clinical and radiological investigation of colo-colonic intussusception with large bowel obstruction was made and after resuscitation and optimization patient was planned for diagnostic laparoscopy. On diagnostic laparoscopy, colo-colonic intussusception involving splenic flexure and proximal descending colon, forming a mass with mild dilatation of proximal part of bowel was identified (Figure 1 and 2). Laparoscopic classical left hemicolectomy with stapled side to side colo-colonic anastomosis was made. Post-operative course was uneventful and patient was discharged on fifth post-operative. Histopathology report confirmed benign hyperplastic polyp as lead point.



**Figure 1: A) Splenic flexure of colon. B) Colo colonic intussusception. C) Descending colon.**



**Figure 2: Lesion involving splenic flexure and proximal descending colon forming a mass with mild dilatation of proximal part of bowel.**

## DISCUSSION

In their study at Massachusetts General Hospital, on adult intussusception involving 58 surgically proven cases over 30 years, Azar et al reported patients' mean age: 54.4 years, presenting symptoms: mostly bowel obstruction, with 44 enteric and 14 colonic intussusceptions, pathologic lesions: 93% associated with a lesion (enteric lesions: 48% malignant, 52% benign, colonic lesions: 43% malignant, 57% benign). The author proposed computed tomography scanning as the most useful diagnostic radiological method, and concluded that diagnosis and treatment of adult intussusception is surgical. Surgical resection of the intussusception without reduction recommended preferred treatment in adults, almost half of both colonic and enteric intussusceptions are associated with malignancy.<sup>1</sup>

In their retrospective review involving 44 patients of adult intussusception, Honjo et al, reported associated malignant tumours in 90.0 % of colonic intussusception cases with the use abdominal ultrasonography and abdominal computed tomography, 42 cases were diagnosed pre-operatively, 41 patients underwent open surgery (intussusception was reduced before or during surgery in 28 patients) and with laparoscopy-assisted surgery was done in 12 patients. The review concluded that preoperative diagnoses were possible in almost all patients. Reduction greatly benefited any method of surgery required or the extent of the resection regardless of the underlying disease and surgical site.<sup>2</sup>

In their review article of adult bowel intussusception, Lianos et al observed that bowel intussusception is rare in adults but common in children. Almost 90% of adult intussusceptions are secondary to a pathological condition and the clinical picture can be very a specific and challenging. They suggested the need for high index of suspicion among that is necessary for the operating surgeons, when dealing with acute, subacute or chronic abdominal pain in adults, as any misinterpretation may result in unfavorable outcomes.<sup>3</sup> Palanivelu et al, reported their experience of 12 adults with intussusception who presented with acute or subacute intestinal obstruction. Computed tomographic scan confirmed the diagnosis in all cases. Laparoscopic-assisted resection with primary anastomosis was successfully performed for all cases. The author concluded that laparoscopy is a valuable diagnostic and therapeutic tool in the management of adult intussusception. It provides all the benefits of minimal access surgery.<sup>4</sup>

Yüksel et al reported their experience of six adult patients all who underwent laparoscopic surgery for intestinal obstruction due to intussusception, and found that the laparoscopic approach seems to be as safe and effective as open surgery, diagnosis and treatment of intussusception.<sup>5</sup>

## CONCLUSION

Our case report highlights the successful surgical management of a case of adult colo-colonic intussusception by the laparoscopic approach as suggested by other authors recently.

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