CASE REPORT

Adenocarcinoma of Cecum Presenting as Ileocolic Intussusception in Adults: A Case Report

Sandip Shrestha[1], Sandesh Doranga[2], Niliza Shakya[3], Susan Pradhan[1], Sujan Shrestha[2], Muskan Shrestha[4]

[1] Department of Surgery, Pokhara Academy of Healths sciences, Pokhara, Nepal
[2] Department of Surgery, Manipal College of Medical Sciences, Pokhara, Nepal
[3] Department of General Surgery, Bir Hospital, National Academy of Medical Sciences, Kathmandu, Nepal
[4] Universal College of Medical Sciences, Bhairahawa, Nepal

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Corresponding Author:

Sandip Shrestha
Department of Surgery, Western Regional Hospital, PoAHS, Pokhara, Nepal
Email: drsandipshrestha@gmail.com

Abstract

Intussusception is telescoping of one segment of intestine into an adjacent one. It is more frequent in children than in adults. In children it is usually primary and benign. In contrast, almost 90% of cases in adults are secondary to pathological conditions.

Here we present a 45 years old female presented to our hospital emergency with the complaint of pain abdomen for 2 months. On evaluation, she was diagnosed with partial bowel obstruction secondary to intussusception. During laparotomy, ileocolic intussusception of around 10cm was seen with cecal mass inside the cecal lumen. Histopathological examination revealed well differentiated adenocarcinoma of cecum with invasion of muscularis propria without lymphnode involvement.

Introduction

Intussusception is telescoping of one segment of intestine into an adjacent one.[1] The incidence of intussusception is 1-3 cases per 1000000 population per year.[2] It is more frequent in children than in adults.[3] In children it is usually primary and benign. In contrast, almost 90% of cases in adults are secondary to pathological condition that serve as a lead point, such as carcinomas, polyps, Meckel's diverticulum, colon diverticulum, strictures or benign neoplasms, which are discovered intraoperatively.[4,5] Due to significant risk of associated malignancy, which approximates 65%, radiological decompression is not addressed preoperatively in adults.[6] Therefore, 70 to 90% of adult cases of intussusception require definite treatment, of which, surgical resection is most often the treatment of choice.[7] Here in this paper, we present a case of intussusception who presented with features of intestinal obstruction. This case is reported with intend to present one of the rare causes of intestinal obstruction in adults and its management in our setting.

Case presentation

A 45 years old female presented to our hospital emergency with the complaint of pain abdomen for 2 months. The pain was around umbilicus, gradual in onset, intermittent, mild to moderate, radiating towards right flank, aggravated on food ingestion. She also complained of vomiting and passage of black stool for past 15 days. Vomiting was non projectile, bilious, mixed with food particles, 2-3 episodes per day and aggravated after eating. She has no history of fever, cough, hematemesis and weight loss. There is no history of surgery or any medical illness. She is nonsmoker and nonalcoholic. She is from middle class family with complete immunization history. Her family and occupational history were unremarkable. On examination, her general condition was fair. Her vitals were within normal limit. She was mildly dehydrated, not anemic nor icteric. On

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abdominal examination, it was soft, mildly distended, tender over right iliac region, bowel sounds were exaggerated. There was a 5x5 cm^2 sausage shaped swelling around the umbilicus, which was soft, tender, mobile in all directions. On digital rectal examination, anal tone was normal, rectum contained pellets of black stool, no mass was palpated. Other systemic examinations were within normal limit. Her hemoglobin level was 9.9g/dl and her total leukocyte count was 7000/mm^3. Remaining complete blood count were within normal limit. Her renal function test, liver function test and other laboratory tests were within normal limit. Her x-ray abdomen shows dilated small intestine with multiple air fluid level and ultrasonogram shows telescoping of approximately 10.2cm of small bowel loop into adjacent bowel loop giving rise to target appearance in right iliac fossa, vascularity and bowel wall oedema present. Feature suggestive of ileocolic intussusception(figure-1). Computerized tomography scan of abdomen couldnot be done due to financial issue.

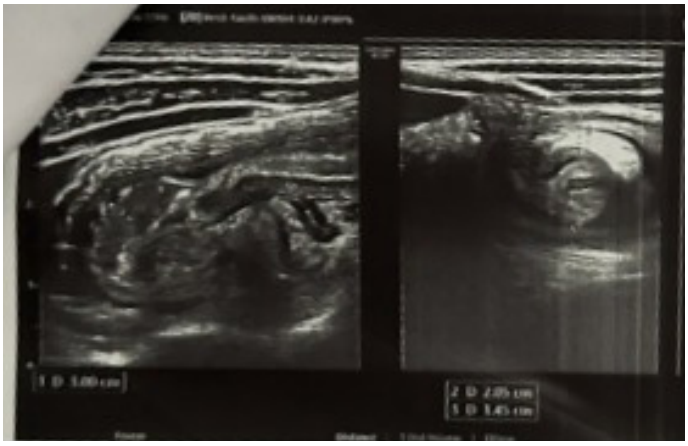

Figure 1: Ultrasonogram

With the diagnosis of partial bowel obstruction secondary to intussusception, case was decided to undergo emergency exploratory laparotomy and proceed after arranging 2 pints of blood. During laparotomy, bowel proximal to terminal ileum was dilated, ileocolic intussusception of around 10cm was seen with cecal mass inside the cecal lumen. Apex of intussusceptum extended upto mid-ascending colon. Vascularity of intestine was intact. There was no fluid collection in peritoneal cavity(figure-2). Right standard hemicolectomy with end-to-end ileocolic anastomosis was done in two layers(figure-3). On gross examination, cecal mass was of around 3.5cm x 3.5cm x 3.5cm, hard in consistency. There was also a 1x1 cm^2 nodular lesion in segment V of liver which was sent for histopathological examination. Histopathological examination revealed well differentiated adenocarcinoma of cecum with invasion of muscularis propria without lymphnode involvement (pT2N0) and normal liver tissue. On her postoperative period, she was kept NPO for 2 days, was given ceftriaxone and ornidazole and iv fluids. Her postoperative period was uneventful and was eventually discharged on postoperative day 7.

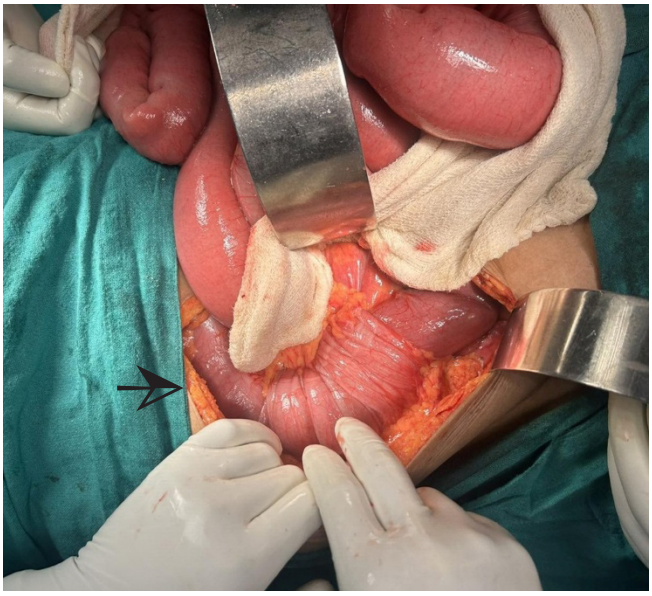

Figure: 2 Intraoperative image of intussusception (arrow)

Figure: 3 Resected specimen with tumor (arrow head)

Discussion

The first report of intussusception was made in 1674 by Barbette of Amsterdam.[8] Intussusception or ''introsusception'' as it was called then, was in addition detailed in 1789 by John Hunter. In 1871 Sir Jonathan Hutchinson was the first to successfully operate on a child with intussusception.[9] Intussusception in adults is a rare condition being found in less than 1 in 1300 abdominal operations and 1 in 100 patients operated for intestinal obstruction.[10] Adult intussusception presents with acute abdomen and is not commonly considered among the top differential diagnosis in bowel obstruction unless proven with imaging. Intussusception is children can present as a triad of abdominal pain, bloody diarrhea and abdominal mass, whereas adults presents with vague abdominal symptoms.[11] The diagnosis of intussusception in adult can be delayed due to non-specificity of symptoms.[12] Nearly 80% of intussusception in children is usually idiopathic whereas in adults, 90% of cases

presents with some etiology.[3]

Intussusceptions are classified according to location into: Enteric, Colonic, and Ileocecal or Ileocolic.[10] Enteric intussusceptions are those that are confined to the small intestine and colonic intussusception are confined to the large intestine. Ileocolic intussusception are defined as those in which ileum prolapses through ileo-cecal valve into the colon and constitute 15% of all intussusception.[13] In our case, part of terminal ileum telescoped into the distal ileum and whole intussusception then went through the ileo-cecal valve into the cecum and up to the ascending colon.

Adult intussusception warrants laparotomy rather than attempts at hydrostatic reduction because of high incidence of underlying abnormality.[14] Controversy remains as to whether reduction of intussuscepting lesion should be attempted at operation. Early reports advocated reducing the intussusception before resection.[4] The disadvantage of this is that malignant cells may be disseminated during the progress despite no clear evidence on this issue. On the other hand, the advantages of reducing the intussusception especially when the small bowel is affected are that it may be possible to preserve considerable lengths of bowel and thereby prevent development of short bowel syndrome. Begos et al suggest resection without attempting reduction when the bowel is inflamed, ischaemic or friable and in obvious colo-colic intussusception(giving the high likelihood of malignancy).[3] In all other cases, reduction should always be attempted initially. However, Azar et al suggested that surgical resection without reduction is the preferred treatment in adults, as almost 50% of both colonic and enteric intussusceptions are associated with malignancy.[14] Simple reduction is however acceptable in post-traumatic and idiopathic intussusceptions where no pathological cause is usually present in the bowel.[15]

Conclusion

In conclusion, adult bowel intussusception is a rare but challenging condition for the surgeon. A high index of suspicion and appropriate investigation can result in prompt diagnosis. Due to the fact that adult intussusception is often frequently associated with malignant organic lesions, surgical intervention is necessary.

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