

Ileo-Caecal Intussusception in an Adult with Mucinous Adenocarcinoma as the Lead Point: Case Report

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ABSTRACT

Intussusception is an invagination or telescoping of a proximal segment of bowel into the lumen of a distal segment. This leads to obstruction and compromise of mesenteric blood flow, with resultant ischemia of the bowel wall. The prevalence of adult intussusceptions is about 1- 5% .It is a challenging condition presenting with non specific symptoms. Unlike intussusceptions in the paediatric age group, which are idiopathic, most of the

cases in adults are associated with an underlying organic pathology like adhesions, lymphoid hyperplasia, trauma, lipomas, leiomyomas, or hemangiomas. A few cases can also harbour malignancy. We present a case of a mucinous adenocarcinoma causing ileo- cecal intussusception in a 62 year old female.

A high index of suspicion for malignancy must be kept for colonic intussusceptions, with segmental resection being the recommended treatment.

Keywords: Adult intussusception, Malignancy, Resection

CASE REPORT

A 62 year old female presented to the surgical outpatient department of Sapthagiri Institute of Medical Sciences and Research Centre, with history of colicky pain in the right lower abdominal quadrant, aggravated by food intake and associated with vomiting. The patient had not passed stools since three days. On examination, the abdomen was moderately distended with tenderness in right iliac fossa. No palpable mass was identified. Auscultation revealed sluggish bowel sounds. Blood tests showed anaemia (HB-10.6gm %) and neutrophilia (Neutrophil count 80%). Erect X ray abdomen showed dilated loops of small intestine [Table/ Fig-1]. CT scan with oral contrast showed a sausage shaped mass in long axis & a target sign mass in the transverse axis in the right lower quadrant of the abdomen suggestive of ileo cecal intussusception with features of intestinal obstruction, with a mass at the lead point.

Emergency midline laporotomy was performed with end to end anastomosis.

Gross findings: The ileo- cecal specimen measured 25 cms in length. The terminal ileum (Intussuseptum) had telescoped into the colon (intussusciens). At the lead point was a polypoidal growth measuring 4 x 3cms across completely obstructing the lumen [Table/Fig-2]. Cut section was grey white, with infiltration into the muscular wall. No nodes were retrieved, attached appendix appeared normal.

Histopathological examination of the mass showed an infiltrating malignant tumour, predominantly in glandular

pattern, with luminal mucin secretions, [Table/Fig-3,4] infiltrating the muscularis mucosae without invasion of the serosa. Adjacent nodes were reactive, surgical margins being free of tumour deposits. A final diagnosis of moderately differentiated mucinous adenocarcinoma was conferred. Patient was discharged after an uneventful recovery and is currently on chemotherapy.

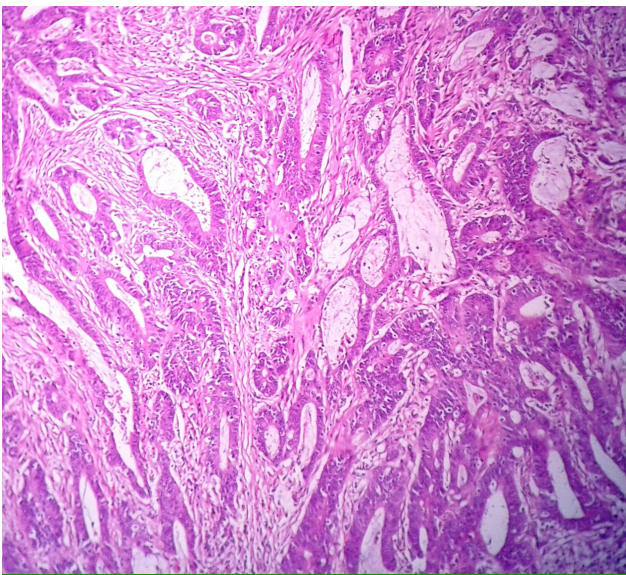
DISCUSSION

Intussusception means telescoping of a proximal segment of bowel (intussusceptum) into the lumen of the adjacent distal bowel (intussusciens). First described by Barbette in 1674, intussusceptions are considered as a disease of infancy and early childhood [1].

It is rare, the condition being found in less than 1 in 1300 abdominal operations and 1 in 100 patients operated for intestinal obstruction. The child to adult ratio is nearly 20: 1.[2] Infantile invaginations constitute more than 80% of infantile bowel obstructions and in majority of cases no aetiology is found. In contrast adult invaginations are rare and constitute < 1% of all mechanical bowel obstructions. [3], The classical triad of colicky abdominal pain, bloody diarrhoea stools and palpable tumor mass seen in paediatric intussusceptions is rarely seen in adults [1] The presentation in adults is non – specific with symptoms of vomiting and pain abdomen ,making pre-operative diagnosis a challenge [4]. However, presence of leucocytosis is a marker for impending strangulation as seen in our case.



[Table/Fig-1]: Erect X ray abdomen showing dilated loops of intestine, with loss of gas shadows in the ilio-cecal region **[Table/Fig-2]:** Gross specimen of ileo-colectomy showing a polypoidal mass as the lead point of intussusception **[Table/Fig-3]:** Junction of normal ileum and the tumour mass forming lead point of intussusception (H&E, X400)



[Table/Fig-4]: Neoplastic glands with luminal mucin, infiltrating the muscular layer (H&E, X400)

Intussusceptions can be categorized into entero- enteric, colo- colic, enterocolic and ilio-cecal [2]. The first tool of investigation is the abdominal X-ray, which show a stacked coin or 'coiled spring' appearance as seen in our case. Barium studies are however contraindicated if the possibility of perforation is suspected. Ultrasound has been used as an investigation tool, with 'doughnut' and "Target sign" on transverse view being classical of intussusception. But its major drawback is masking by gas filled bowel loops as seen in our case and operator dependency [5]. Intussusception can be confidently diagnosed on CT by its pathognomic "target sign" or sausage appearance. Also, it is less invasive in cases of intestinal obstruction and peritoneal irritation [6].

In adults 80 -90% of the intussusceptions are secondary to an underlying pathology, with approximately 65% due to malignant or benign neoplasms. The incidence of malignancy is particularly high with colonic intussusceptions. Cakir et al., studied 47 cases of intussusceptions over a period of 11

years and found ileal polyp (41%), idiopathic (13%), parasite (2%), Meckel's diverticula (2%), ileal fibroma (2%), following appendectomy (2%) and jejunum polyp (2%) to be the etiologies. Malignant causes were cecal adenocarcinoma (26%), sigmoid adenocarcinoma (4%), ileum mucinous adenocarcinoma (2%), ileum adenocarcinoma (2%) and rhabdomyosarcoma (2%) as causes of intussusception [3]. Shaheen K et al., [2] have reported a case of Diffuse large B cell lymphoma causing intussusceptions. Of the 20 cases of intestinal intussusception studied by Yakan et al., a majority of the causes were benign lesions like fibroid polyp, ilial lipoma, Meckel's diverticulum, with only 3 being cases of adenocarcinomas [5]. Malignant lesions of the colon, both primary and metastatic constitute only 6 - 30 % of the cases [7] Our case was one such case where a mucinous adenocarcinoma caused the intussusception. The diagnosis was given after ruling out all the above mentioned differentials.

Laparotomy is mandatory for management in adult intussusceptions, reason being - high incidence of malignancy in colonic intussusceptions [8]. Treatment of adult intussusceptions usually requires resection of the involved bowel segment, although reduction can be considered if the viability of the segment is good [7]. Risk of intraluminal tumour seeding, venous embolisation of malignant cells, spilling of succus through inadvertent perforation, and anastomotic complication in cases of an oedematous and weakened bowel are some of the side effects of attempting reduction prior to resection [6,9]. Also reduction remains controversial in adults, in treating adult intussusceptions as there is a high chance of harbouring malignancies as seen in the case presented.

CONCLUSION

Adult intussusception is a rare entity presenting with non-specific symptoms, making the pre-operative diagnosis a challenge, with abdominal CT being a pivotal investigation. Resection of the affected segment with end to end anastomosis is recommended, without reduction as the lead point can often be malignancy as seen in our case.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest of any type pertaining to the case.

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