

A Case Series of Intussusception in Adults

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Abstract: Introduction: Intussusception is telescoping or invagination of one portion (segment) of bowel into the adjacent segment. Intussusception in adults is uncommon, accounting for 5% of all intussusceptions and representing only 1% of intestinal obstructions. Adult intussusception is usually secondary to an identifiable cause like malignant or benign neoplasms, polyps, Meckel's diverticulum, and postoperative adhesions. Association with malignant tumors is more common in large bowel intussusception than small bowel intussusceptions. In adults, intussusception presents insidiously with vague abdominal symptoms hence diagnosis becomes difficult. CT is the most effective diagnostic modality. Treatment in adults is usually exploratory laparotomy with surgical resection. Materials and Methods: A total of 5 cases which were admitted in Govt. Kilpauk Medical College Hospital and Govt. Royapettah Hospital with the diagnosis of intussusception during the period of 6 months from June 2023 to November 2023 were considered for this series. Results: Out of 5 cases included in this case series 1 case was ileocolic, 3 cases were ileoileal, 1 case was colo colic intussusception.

Keywords: Intussusception, obstruction, resection, anastomosis.

1. Introduction

Intestinal intussusception in adults is uncommon, accounting for about 5% of all intussusceptions and representing only 1% of intestinal obstructions (1–4). Unlike pediatric intussusception, which is usually idiopathic, adult intussusception is most often secondary to an identifiable cause (1–4). Many pathological conditions like malignant or benign neoplasms, polyps, Meckel's diverticulum, and postoperative adhesions, may act as lead point (1, 3, 4). Association with malignant tumors is more common in large bowel intussusception (65–70% of cases), while small bowel intussusceptions are secondary to a malignancy in 30–35% of cases only (1). In adults, intussusception is more likely to present insidiously with vague abdominal symptoms and rarely presents with the classic triad of vomiting, abdominal pain and passage of blood per rectum, making diagnosis difficult (5–7). CT findings are pathognomonic for intussusception, making CT the most effective diagnostic test (1, 5, 7). In contrast to pediatric intussusceptions, which are managed nonoperatively with air contrast enemas, treatment in adults is exploratory laparotomy for surgical reduction or resection (3, 6–8).

2. Materials and Methods

A total of 5 cases which were admitted in our institution (Govt. Kilpauk Medical College Hospital and Govt. Royapettah Hospital) with the diagnosis of intussusception during the period of 6 months from June 2023 to November 2023 were considered for this series.

3. Case Series

Case 1:

A 17 years old male came with complaints of abdominal pain, vomiting, constipation for 2 days. On examination abdomen was soft, tenderness present over the epigastric, umbilicus and left lumbar region. CECT abdomen and pelvis showed colocolic intussusception with target sign.

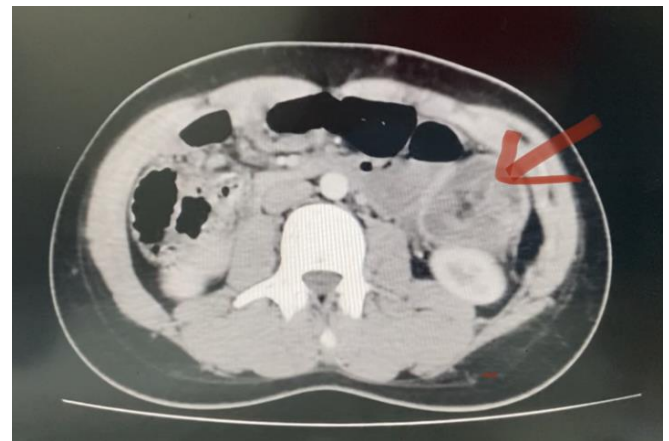


Figure 1

Patient was taken up for emergency laparotomy and found to have colocolic intussusception with invagination of caecum and ascending colon into transverse colon.

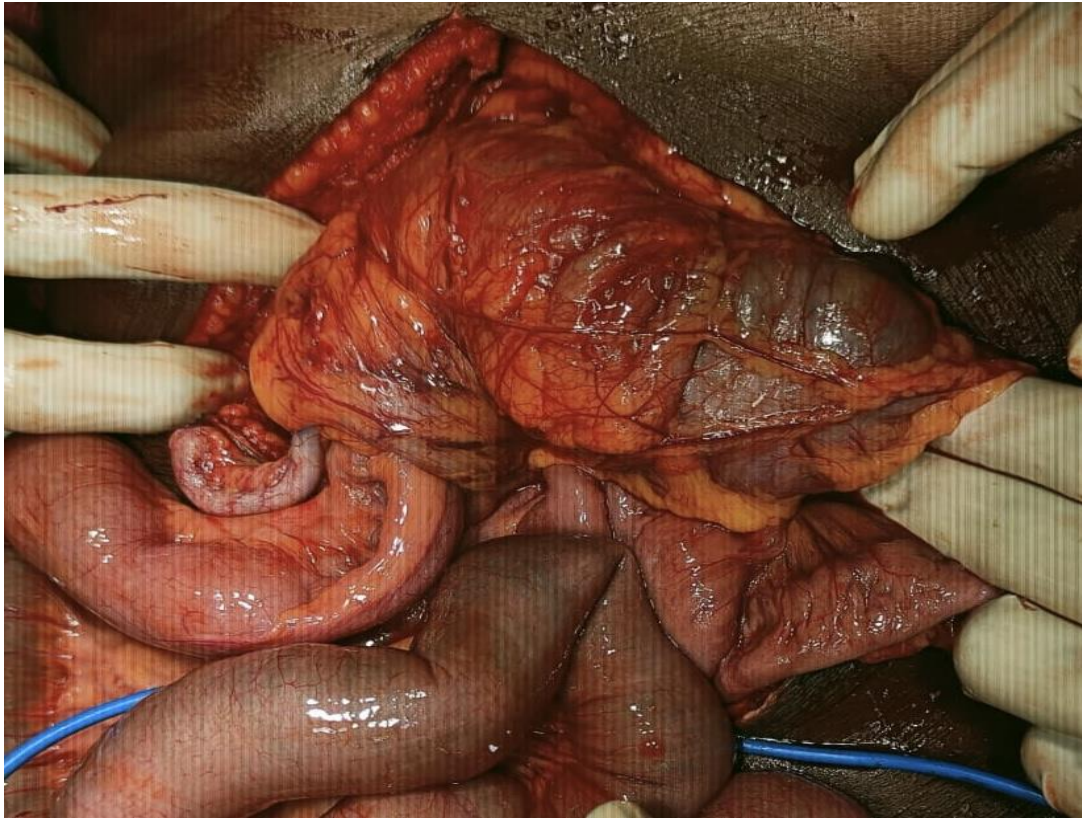


Figure 2

Reduction done then apex was found to be caecum with lead point in it. Hence proceeded with resection of terminal ileum and caecum with side to side anastomosis of ileo - ascending colon. HPE report came out to be a inflammatory caecal polyp.



Figure 3



Figure 4



Figure 5

Case 2:

A 40 years old male came with the complaints of abdominal pain, vomiting and obstipation for 3 days. On examination abdomen was distended with diffuse tenderness and guarding. CECT abdomen and pelvis showed ileocolic intussusception with obstruction and dilatation of small bowel loops.



Figure 6

Patient was taken up for emergency laparotomy and found to have ileocolic intussusception with mass in the caecum.

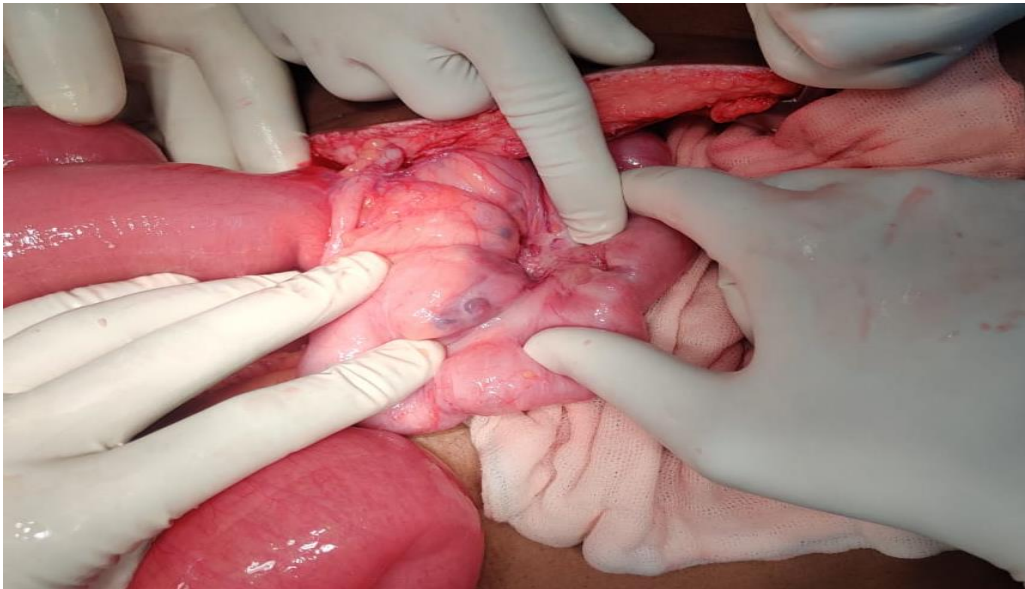


Figure 7

Hence right hemicolectomy was done with ileotransverse anastomosis. HPE report was moderately differentiated adenocarcinoma caecum.



Figure 8

Case 3:

A 43 years old female presented with complaints of abdominal pain and vomiting on and off for past two months. On examination tachycardia was present. Abdomen was distended with tenderness in right iliac fossa and hypogastrium with no guarding. CECT abdomen and pelvis showed features suggestive of ileoileal intussusception with obstruction.

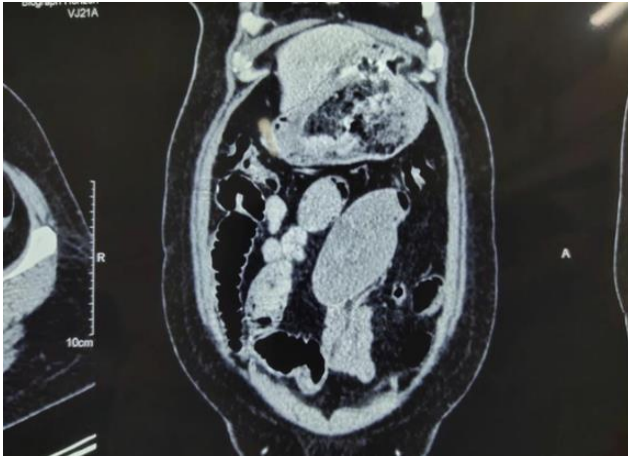


Figure 9

The patient was taken for emergency laparotomy and found to have Ileo ileal intussusception. Manually reduction was done, a polypoidal lesion of size 3x3cm was found as lead point. Hence resection with end to end anastomosis of ileum was done. HPE report came out as leiomyoma.

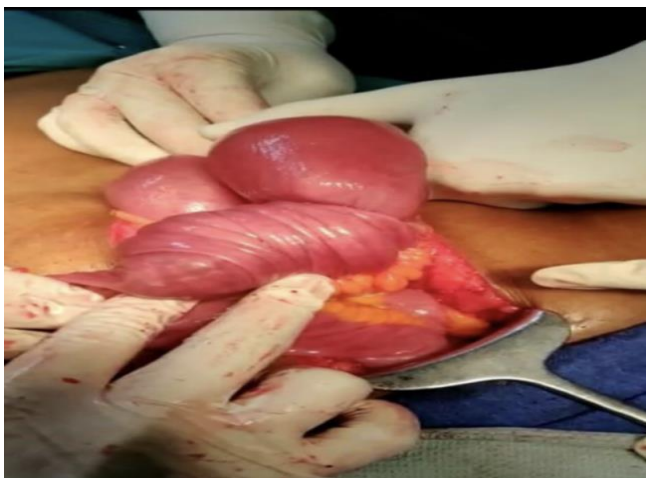


Figure 10



Figure 11

Case 4:

A 40 years old male came with complaints of abdominal pain, vomiting and constipation for 5 days. On examination abdomen was distended with diffuse tenderness and guarding. CECT abdomen and pelvis showed ileoileal intussusception with obstruction.

Patient was taken for emergency laparotomy and found to have ileoileal intussusception. Reduction was done, then proceeded with resection of ileum with end to end anastomosis. HPE report was polyp.



Figure 12

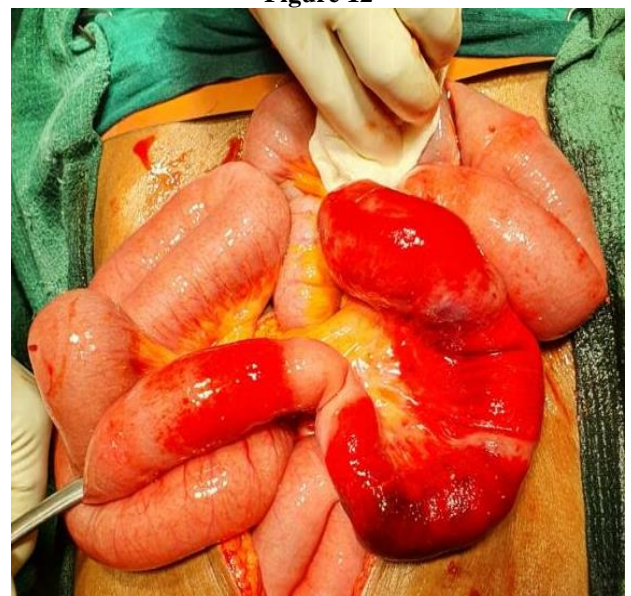


Figure 13



Figure 14



Figure 16

Case 5:

A 59 years old male presented with complaints of abdominal pain, obstipation and malena for 7 days. On examination abdomen was distended with diffuse tenderness, no guarding and rigidity. Per examination revealed collapsed rectum with black tarry stools. Xray abdomen showed multiple dilated air fluid levels. CECT abdomen showed features of ileoileal intussusception.



Figure 15

Patient was taken for emergency laparotomy and found to have ileoileal intussusception about 20 cms from ileocaecal junction with 4cms of proximal loop being gangrenous. Hence proceeded with resection of ileum with end to end anastomosis. HPE report showed lead point was the lymph node.



Figure 17

4. Results

Out of 5 cases included in this case series 1 case was ileocolic, 3 cases were ileoileal, 1 case was colo colic intussusception. Case 1 – colo - colic intussusception with lead point as inflammatory polyp

Case 2 – ileocolic intussusception with lead point as adenocarcinoma caecum

Case 3 – ileo - ileal intussusception with lead point as Leiomyoma

Case 4 – ileo - ileal intussusception with lead point as polyp

Case 5 – ileo - ileal intussusception with lead point as lymph node.

5. Discussion

Intussusception is telescoping or invagination of one portion (segment) of bowel into the adjacent segment (1, 9–11) . It

usually begins in the region of the terminal ileum, and extends distally into the ascending, transverse or descending colon. Rarely, an intussusception may prolapse through the rectum (12). It is most common in children, with a peak incidence between 5 and 10 months of age. It is the commonest cause of intestinal obstruction in children (9–11).

About 90% of cases are idiopathic but an associated upper respiratory tract infection or gastroenteritis may precede the condition (10, 11). One hypothesis suggests that hypertrophy of the Peyer's patches in the terminal ileum from an antecedent viral infection acts as a lead point (12). In older children, the incidence of a pathologic lead point is 12%, and Meckel's diverticulum is the most common lead point for intussusception. Other causes include intestinal polyps, inflamed appendix, submucosal hemorrhage associated with Henoch - Schönlein purpura, foreign body, ectopic pancreatic or gastric tissue, and intestinal duplication (10).

Intussusception can be single or multiple (rare), antegrade or retrograde (rare) (9). An intussusception is composed of three parts - Apex is the one which advances, Intussusciens is the one which receives (outer sheath), Intussusceptum are the tubes which advance (middle and inner sheath) (9, 11). Types include Ileocolic (most common), Ileoileocolic, Ileoileal, Colocolic and multiple (11).

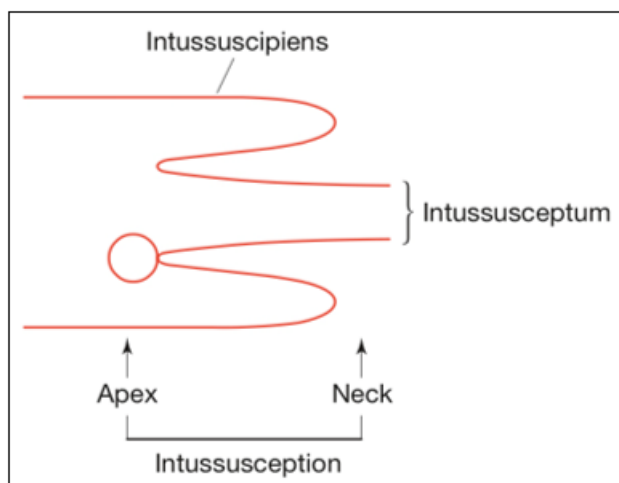


Figure 18

Symptoms include abdominal pain, vomiting, passage of bloody mucus (currant jelly stool), and a palpable abdominal mass (10). On examination, an elongated mass is detected in the right upper quadrant or epigastrium with an absence of bowel in the right lower quadrant (Dance's sign) (12).

Plain X - ray abdomen shows multiple air fluid levels. CT scanning is the most sensitive radiological method to confirm intussusception. Barium enema shows typical claw sign or coiled spring sign (Pincer end). Ultrasound shows target sign or pseudo kidney sign or bull's eye sign, which is diagnostic. Doppler may show mass with doughnut sign and is useful to check blood supply of bowel (9–11). Hydrostatic reduction by enema using contrast material or air is the therapeutic procedure of choice. Contraindications include the presence of peritonitis and hemodynamic instability. The recurrence after hydrostatic reduction is approximately 11%, and it usually occurs within the 24 hours after the reduction. When it recurs, it is usually managed by another air enema

reduction. A third recurrence is an indication for operative management (9, 10). Reduction is achieved by gently compressing the most distal part of the intussusception toward its origin. After reduction, viability of the bowel is checked (9, 11). Bowel resection is required in cases in which the intussusception cannot be reduced, the viability of the bowel is uncertain, or a lead point is identified (10).

6. Conclusion

Intussusception being a rare entity in adults early diagnosis and timely intervention is required in all the cases to avoid unnecessary complications. CT remains the diagnostic modality of choice. Emergency laparotomy with en bloc resection remains mainstay of treatment in adults as most cases are associated with a lead point in it.

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