



ADULT INTUSSUSCEPTION SECONDARY TO GASTROINTESTINAL LIPOMA – A CASE SERIES

General Surgery

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ABSTRACT

Adult intussusceptions are a rare entity, accounting for 1-5% of all intussusceptions. The etiopathology and management varies largely as opposed to pediatric intussusceptions. While, the pathology is most commonly idiopathic in children, there usually is a structural abnormality in adults, which acts as a lead point. Consequently, the management also differs - while it is conservative in children, the management is usually surgical in adults. Moreover, the pathology precipitating intussusception also differs depending on the site of origin. In this case series, we report three cases of gastro intestinal lipomas who presented with intussusception and their management at our institution.

KEYWORDS

adult intussusception, submucosal lipoma, jejuojejunal intussusception, colo-colic intussusception

INTRODUCTION

Intussusception in adults is rare. The clinical picture of intussusception in adults is subtle and the diagnosis is therefore elusive. The presence of a structural abnormality in the great majority of the adult cases mandates high clinical suspicion. Gastrointestinal lipomas are rare benign tumors and intussusception due to a gastrointestinal lipoma constitutes an infrequent clinical entity.

CASE REPORT

CASE 1

A 24 years old male, with no known comorbid illnesses, presented to our emergency department with a history of severe colicky abdominal pain, vomiting and hematochezia for a duration of two days. He had similar episodes of colicky abdominal pain over the past 3 months, which had resolved spontaneously. On examination, he was hemodynamically stable. He had diffuse tenderness all over the abdomen, with a vague lump palpable in the periumbilical region. Per rectal examination revealed red currant jelly stools. Baseline blood investigations were sent and found to be within normal limits. Ultrasonogram of the abdomen was done, on which a mass with concentric hyper and hypochoic rings were seen, suggestive of intussusception. Contrast enhanced computed tomography scan of the abdomen showed jejuno-jejunal intussusception.

An emergency exploratory laparotomy was done, which revealed intussusception at the level of proximal jejunal loops. The intussuscepted segment was gently reduced. An intraluminal pedunculated mass was found to be the lead point. The jejunal loops were noted to be edematous and ischemic. Hence, the affected jejunal segment was resected and Jejunio-jejunal anastomosis was performed.

On cut section, a pedunculated polypoidal lesion of size 4.5 x 4 x 2cm in the jejunum was found to be the lead point of the intussusception. Histopathological examination of the excised specimen with hematoxylin-eosin stain showed lobules of mature adipocytes with intervening fibrosepta, scattered lymphoplasmacytic infiltrates, suggestive of submucosal lipoma.

Post operatively, patient recovered well. Oral diet was started on 3rd post operative day, sutures were removed on 14th post operative day. After one year of follow-up, patient was symptom free.



Figure 1: Image of CECT Abdomen, showing intussusception



Figure 2: Gentle reduction of the affected segment



Figure 3: Specimen of the resected segment with the submucosal lipoma

CASE 2

A 45 years old male presented to the emergency department with complaints of severe abdominal pain in the peri umbilical region, associated with vomiting of one day duration. he had been having similar episodes over the past 4 months, which would relieve spontaneously. On examination, he was hemodynamically stable, with normal vital parameters. On systemic examination there was tenderness in the periumbilical region, with mild distension. There was no palpable mass. Per rectally, a bloodtinged discharge was noted. Baseline investigations were found to be within normal limits. Plain radiograph of the abdomen showed features of intestinal obstruction. Contrast enhanced CT scan of the abdomen was taken, which showed two lipomas, in the distal jejunal and proximal ileal loops. The patient was taken for exploratory laparotomy. Intraoperatively, intussusception was noted with the telescoping of distal jejunal loop into the proximal ileal loop. Gentle milking was done to reduce the intussusception. The affected small bowel segment was resected and anastomosed. On cut section, two lipomas were noted in the distal jejunal and proximal ileal loops, which was confirmed by histopathology as submucosal lipoma. Patient recovered well post operatively, was started on oral diet on 4th post operative day and discharged on 10th post operative day. He was followed up at three

monthly intervals, and has been symptom free 10 months after the surgery.

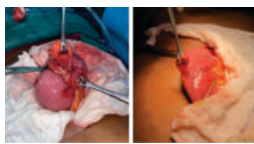


Figure 4: Intra-operative picture of jejunal lipoma

CASE 3

A 58 years old male patient presented with abdominal pain, distension and constipation of one week duration. he was hemodynamically stable. On examination, abdomen was distended, with tenderness in left hypochondrium. Per rectally, fecal soiling was minimal. Plain radiograph of the abdomen was equivocal. Computed tomography of abdomen was done after administering contrast, which showed intussusception at the level of descending colon, with a possible lipoma as the lead point.

Initially, patient was managed conservatively. Colonoscopy was done, which showed a broad based polypoidal mass at the splenic flexure. Hence, patient was planned for laparotomy, which was proceeded with limited resection and anastomosis, after reduction of the intussuscepted segment.

Patient recovered uneventfully. Oral diet was started on 4th post operative day and discharged on 10th post operative day. Histopathological examination confirmed the pathology to be a submucosal lipoma. After 7 months of follow-up, patient is doing well and is symptom free.

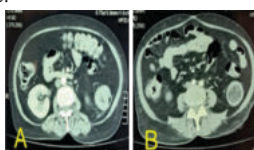


Figure 5: A, B – CT Images showing intussusception of descending colon

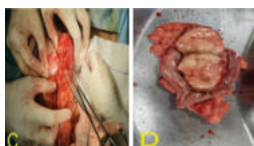


Figure 6: C – Intussusception at descending colon Figure D – Cut section showing Lipoma

DISCUSSION

Intussusception is defined as the telescoping of the proximal segment of gastrointestinal tract (intussusceptum) into the lumen of adjacent segment (intussusciens). Intussusception is usually a disease of infancy and early childhood. Adult intussusceptions are rare, and account for 1% of all bowel obstructions and 0.003% - 0.02% of all inpatient admissions.^[1,2] It is also thought to account for only 5% of all intussusceptions. Mean age of presentation in adults is 54 years, with a slight female preponderance (Male-to-female ratio 1:1.3).^[4] The symptoms can be varied and patients usually present with abdominal pain (71%-100%), nausea and vomiting (40%-60%), rectal bleeding (4%-33%),^[4] abdominal mass (<10%)^[5] and features of peritonitis (50%).^[6] Based on the site affected, it can be classified into jejuno gastric, jejunojejunal, ileoileal, ileocolic or colocolic intussusception. 90% of adult intussusceptions have a mechanical cause, with 67% of them occurring in small bowel^[7] including lipomas, adenomas, leiomyomas, hemangiomas, fibromas, Meckel's diverticulum, adhesions and adenitis.

In our case series, the lead point was found to be a lipoma. Gastrointestinal lipomas are uncommon and are a rare cause of intussusception in small bowel.^[8] it can be submucosal or subserosal. Plain radiograph of the abdomen is usually the first line of investigation, where the signs of intestinal obstruction can usually be noted. Ultrasonography is very useful, wherein the affected segment can be visualised as concentric hyperechoic and hypoechoic rings, corresponding to the mucosa, bowel wall and the mesenteric fat on cross section ('Target Sign', 'Doughnut Sign'). Lipoma may be seen as a hyperechoic mass in an ultrasonogram. Contrast enhanced computed tomogram of the abdomen can be used as an excellent modality for

imaging, presenting characteristic signs with the inner intussusceptum and outer intussusciens, with the mesenteric fat and its vasculature seen as an eccentric area of hyperdensity. ('Sausage sign', 'Target Sign').^[9] Gastrointestinal lipomas can be diagnosed as a round, homogenous, well circumscribed masses with fat density.

Management of adult intussusceptions is largely surgical, in contrast to pediatric intussusceptions. Colonic intussusceptions are commonly due to malignant lesions, hence resected en bloc without reduction.^[10] Small bowel intussusceptions are majorly due to benign lesions, hence can be managed conservatively by reduction without resection. However, when the pathology is neoplastic, or the bowel is edematous or ischemic, resection of the affected segment is performed.^[11]

Prognosis in adults with intussusception depends largely on the etiology, with mortality of 9% in benign lesions and 52% in malignant lesions.^[5]

CONCLUSION

Intussusception in adult is an uncommon condition invariably associated with an underlying cause which needs surgical intervention to arrive at a definitive diagnosis. Gastrointestinal lipoma can cause intussusception presenting as obstruction. Ultrasound and CECT of the abdomen are very important adjuncts in preoperative diagnosis of intussusception. Early surgical intervention is the main stay of definitive diagnosis and treatment.

Conflict Of Interest: None

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