



## GASTRODUODENAL INTUSSUSCEPTION IN ADULTS, A RARE CLINICAL ENTITY: A CASE REPORT AND REVIEW OF LITERATURE

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### ABSTRACT

Adult intussusception is a rare cause for intestinal obstruction accounting for about 1-5% of patients. Those presenting with intussusception usually have intussusception present in the small bowel with a pathological lead point such as lipoma, polyp, diverticulum which can be diagnosed by radiological methods with no scope for endoscopic reduction. Here, we present a case of duodeno-gastric intussusception which was reduced endoscopically in the emergency and then definitive procedure was done after knowing the pathological nature of the lead point before performing elective surgical resection.

**KEYWORDS :** Duodenogastric intussusception, adult intussusception, endoscopic reduction, altered GI motility

### INTRODUCTION

Adult intussusception accounts for about 1-5% of the patients.[1,2,3] Bowel lesions accounting for intussusception are adenomas, Meckel's, GIST, lipomas, neurofibromatosis, Peutz-Jegher Polyp, etc., Almost 2/3rds of the cases occur due to benign lesions[2]. Most of the adult intussusception have an identifiable cause such as previous surgery as most of the gastrogastic or gastroduodenal intussusception occurs after formation of stoma or after a surgical procedure usually[2]. Here, we describe intussusception in an adult female who presented to us with symptoms of intestinal obstruction and a mass palpable per abdomen who was diagnosed to have gastroduodenal type of intussusception and how we managed her insights about the pathophysiology behind the occurrence of gastroduodenal intussusception.

### Case Report

A 23 year old mother of 2 children came with complaints of abdomen pain and vomiting for a day. She had complaints of melena 2 episodes 1 month ago. There was no history of surgeries in the past. On examination, a sausage shaped mass of size 3\*3 cm felt near the right umbilicus which disappeared under the palpating fingers. CECT abdomen with oral and IV contrast revealed a mass in 1<sup>st</sup> part of duodenum intussuscepting into the lower part of the stomach. We did an esophagogastroduodenoscopy which showed 2 polyps in the antrum and incisura, size 3\*3cm which had caused the intussusception. Retrograde intussusception of duodenum into the stomach was reduced by insufflation during endoscopy successfully. Biopsies of the polyp revealed a benign nature of the polyp, hence an elective laparoscopic distal gastrectomy and gastrojejununal anastomosis was performed.

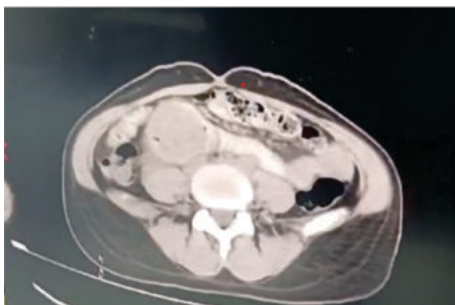


Figure 1: CT Image Showing Duodenal Mass Causing Intussusception And Target Sign

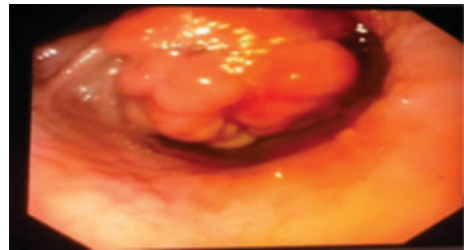


Figure 2: UGI Scopy Image Of The Polyp

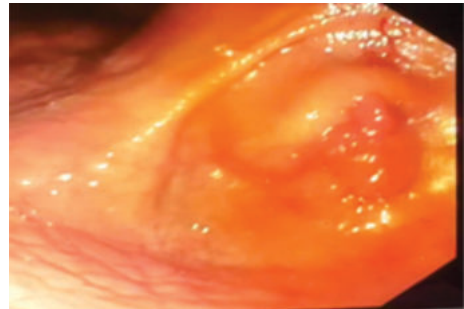


Figure 3: After Reduction Of Intussusception Endoscopically



Figure 4: Resected Specimen Showing Polyp In The Antrum

## DISCUSSION

Duodenogastric intussusception is a rare and complex clinical entity that poses significant diagnostic and therapeutic challenges. The present case highlights the importance of considering this condition in the differential diagnosis of gastric outlet obstruction, particularly in patients with underlying gastrointestinal pathology.

The management of duodenogastric intussusception requires careful consideration of the underlying cause, as well as the patient's overall clinical condition. In the present case, the decision to proceed with surgical intervention was based on the presence of underlying gastric pathology. The successful outcome in this case highlights the importance of UGI scopy before surgical intervention. Further studies are needed to better understand the optimal management strategies for this rare and complex condition.

The cases which were mentioned in the literature described adults who were above the age of 60 yrs of age were malignant neoplasms can be of possible etiology. Our patient was way younger than those mentioned, keeping in mind that malignant neoplasms do occur in the younger age group, we couldn't rule out the possibility of malignant polyp causing intussusception. She had presented to us in the emergency department with pain and vomiting. With limited resources in the emergency, we had to put her on conservative management for an evening so that she can undergo upper gastrointestinal endoscopy, the next day, so that it could provide us the information on the benign or malignant nature of the polyp, which could possibly affect the surgical procedure to be performed.

A handful of cases have been reported and this case also had a soft tissue growth (which was the pathological lead point) whose benign or malignant nature was unknown due its emergency presentation. Benign intussusception occurs with a variety of acute, intermittent or chronic symptoms making preoperative diagnosis difficult. In the fasting state, small intestinal motility is controlled by the MMC, which exhibits three phases. Phase I is a quiescent period and represents 20% to 30% of the total cycle length. Phase II accounts for 40% to 60% of the total cycle length and is characterized by intermittent and irregular contractions. In phase III, intense, rhythmic contractions develop and propagate from the proximal to the distal portion of the intestine over a 5- to 10-minute period. The MMC cycle occurs approximately every 90 minutes during the interdigestive period. However, after a meal, this fasting pattern of intestinal motility is changed to a postprandial pattern, with intermittent phasic contractions of irregular amplitude that are similar to the phase II contractions of the MMC[6]. Peristalsis occurs when a segment of circular muscle contracts as a result of excitatory motor neurons while the intestinal segment aboral to the contracted segment is simultaneously relaxed by inhibitory neurons. An altered gastrointestinal motility in both oral and aboral propagated MMCs, with minimal Phase II activity[6] causes retrograde intussusception. This further supports the hypothesis that altered intestinal motility may cause intussusception. It is also unknown whether the retrograde intussusception could occur due to incomplete fixation of stomach near the lesser curvature[6].

It is important to understand the pathophysiology behind the intussusception which could possibly affect the decision making in the management of gastroduodenal intussusception presenting in the emergency.

## CONCLUSION

The present study indicates that intussusception in retrograde manner could be due to altered gastrointestinal motility or due to incomplete fixation of distal stomach. A high index of suspicion should be maintained in those presenting with

unusual location of intussusception at gastroduodenum and in unusual age and the feasibility of upper gastrointestinal endoscopy prior to definitive surgical management so that adequate and prompt surgical intervention can be made.

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