

CASE REPORT

A CASE OF DUODENO-DUODENAL INTUSSUSCEPTION

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ABSTRACT: Intussusception is the telescoping of the full thickness of the bowel wall into the distal segment. Here we present a rare case duodenoduodenal intussusception with symptoms of recurrent abdominal pain and vomiting since two years. Surgical excision remains the treatment of choice in such cases as done in ours with the histopathology confirming the lead point to be a benign tubulovillous adenoma. Intussusception in adults presents with vague abdominal symptoms, hence the diagnosis becomes a challenge. The diagnosis is usually confirmed with the help of a CT scan or at laparotomy in the event of an emergency.

KEYWORDS: Duodeno-duodenal, Intussusception, Tubulovillous adenoma.

MESHTERMS: Intussusception.

INTRODUCTION: Duodenoduodenal intussusception is a rare condition and is usually caused by the presence of a tumor. It is rare because the duodenum is fixed in the retroperitoneal position.^[1] Its occurrence is usually secondary to tumors, lipoma, Brunner's gland hamartomatous polyps or adenomas. To date, only a few cases have been reported in the literature. A comprehensive literature search revealed 44 English reports that provided adequate descriptions of an additional 47 such cases.^[2] Here we present a case of duodeno-duodenal intussusception.

CASE REPORT: A 35 year old male, moderately built and nourished, presented with recurrent episodes of upper abdominal colic and non-bilious vomiting a few hours after meals since 2 years. He was being treated elsewhere for these complaints which were relieved by medications. There was no malena, hematemesis or history of previous surgeries. No history of weight loss.

Examination revealed mild tenderness on deep palpation in the upper abdomen with no mass being palpable. Hematologic tests including liver function tests (LFT) were within normal limits. An upper gastrointestinal endoscopy revealed that the scope could not be negotiated into the third portion of the duodenum and the rest of the study to be normal. Colonoscopy done was normal.

A contrast enhanced abdominal CT showed a 'Target sign' [FIGURE 1] caused by a mass at the second part of the duodenum acting as the lead point along with marked dilatation of the proximal duodenum, thus confirming the diagnosis of duodenoduodenal intussusception.

At laparotomy, the findings were suggestive of a duodenoduodenal intussusception of the second part of the duodenum with a pedunculated, cauliflower like tumor arising from the anteromedial wall of the second portion of the duodenum being the lead point.

Kocher's maneuver was performed and the intussusception successfully reduced. Duodenotomy was done and the mass was excised along with a cuff of normal duodenal mucosa. The postoperative course was uneventful and the patient was discharged 11 days after surgery.

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Histology confirmed that the lesion causing the intussusception was a tubulovillous adenoma with no features suggestive of malignancy. Patient is currently asymptomatic on follow up after one year.

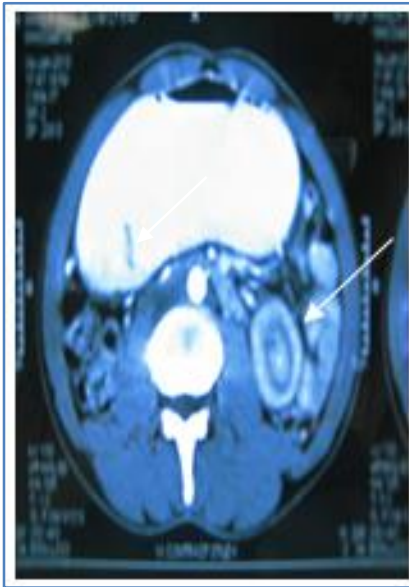


Fig. 1: Abdominal CT scan showing the target Sign suggestive of intussusception

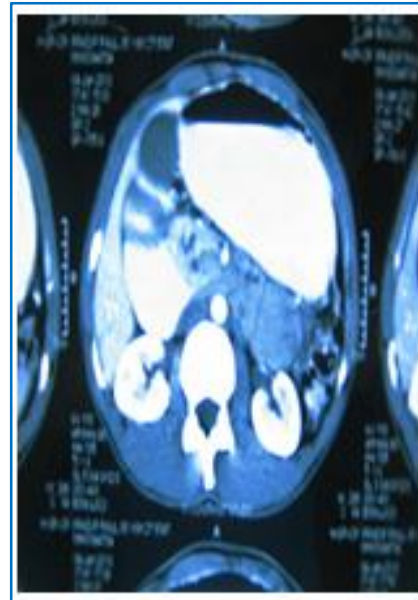


Fig. 2: Abdominal CT scan showing the tumour forming the lead Point



Fig. 3: Intraoperative picture showing the intussusception at d2



Fig. 4: Intraoperative picture of the tumor lead point

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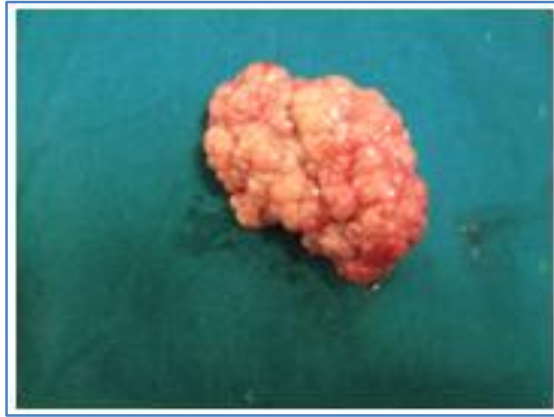


Fig. 5: Excised specimen

DISCUSSION: Intussusception is the condition when the full thickness of the bowel wall telescopes into the distal bowel. It is not common in adults, with an incidence of around 2-3 cases per 1 000 000 per year.^[3]

Although the occurrence of intussusceptions in adults is rare, it accounts for almost 1%-5% of cases presenting with bowel obstruction. The most common classification divides intussusceptions into four categories: enteric, ileocolic, ileocaecal and colonic with ileocolic intussusception being the most common.^[4]

The duodenum when compared is a rare site of intussusception, mainly because of its anatomical relations. It is fixed to the retroperitoneum not only by the peritoneum but the ligament of treitz, superior mesenteric vessels and the head of pancreas.^[1] However, duodenoduodenal intussusception is almost always associated with a lead point. It is well documented that 80-90 % of adult intussusceptions have an underlying cause with neoplasms being the lead point in 65 % of the cases.

Galandiuk et al reported that 88% of duodenal adenomas were located in the second part of the duodenum.^[5] Duodenoduodenal intussusception in this patient was associated with tubulovillous adenoma as the lead point in D2 as noted. The tubulovillous adenoma causing such intussusception as observed in this case is a rare occurrence. The symptoms that these patients present with may not be specific and may easily be misinterpreted. Epigastric pain, abdominal mass, gastrointestinal bleeding and enteral obstruction may be present. The classical triad of abdominal pain, palpable mass and passage of red currant jelly stools described in children is seldom seen in adults. A palpable abdominal mass may be present in only 7% to 42% of cases.^[6] In cases described by McGrath et al.^[7] and Chalmers et al.^[8] who encountered duodenal tumours with duodenoduodenal intussusceptions, they found dilated biliary and pancreatic ducts in their patients. However these features were not seen in our case. In our case, when an upper GI endoscopy was not conclusive, the diagnosis of duodenoduodenal intussusception was made based on a contrast enhanced abdominal CT scan showing the 'Target Sign' [FIGURE 1] at the second part of the duodenum. The ability of a CT scan to diagnose intussusceptions is reported between 71.4% to 87.5% in literature, while its specificity in adults has been reported to be 100%, as verified by the subsequent surgery.^[9]

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Although surgical resection remains the recommended treatment for adult intussusceptions due to the propensity for obstruction and the relatively high incidence of malignancy, the optimal surgical management remains controversial.^[4]

For tumours at the first part of the duodenum, a transduodenal polypectomy is recommended while a segmental duodenal resection is recommended for tumours in the third and fourth part of the duodenum.^[1] In our case a transduodenal polypectomy was done wherein the mass was excised along with a cuff of normal duodenal mucosa. Patient has been followed up for one year and is without symptoms.

In view of its non-specific symptoms and findings, intussusception in adults becomes a differential diagnosis in cases of intestinal obstruction and may present as an emergency requiring immediate surgery. In intestinal intussusception, a rare entity of duodenoduodenal intussusception as in our case should be considered.

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