



A RARE CASE PRESENTATION OF REVERSE DUODENODUODENAL AND JEJUNOJEJUNAL INTUSSUSCEPTION

General Surgery

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ABSTRACT

Intussusception is characterized by telescoping the proximal bowel loop into the distal bowel. Primary idiopathic small bowel intussusception is common in children while secondary intussusception is usually present in adults with intestinal diseases such as tumors, polyps, tubercles, adhesions, and Meckel diverticulum. However, the intussusception of the reverse duodenoduodenal is rarely reported. Herein, we report a case of a large duodenal polyp that is causing reverse duodenoduodenal intussusception & jejunojejunal intussusception with symptoms of persistent vomiting and epigastric pain. The diagnosis was established with help of investigations including, upper GI scopy and Contrast-Enhanced Computed Tomography (CECT) of the abdomen.

KEYWORDS

CASE REPORT :

A 35-year-old male patient presented to the department of general surgery, SIMMER hospital, Surat with colicky-type epigastric pain with persistent vomiting for 2 years. Physical examination of abdomen, x-ray abdomen standing, and ultrasonography of the abdomen were normal. The patient was planned for an upper GI scopy for persistent pain & vomiting which revealed a huge polypoidal mass (approximately 5-6 cm) with a large base (3-4 cm) in the D3-D4 part of the duodenum. The biopsy from the mass was taken and sent for histopathological examination which was suggestive of the juvenile polyp. Contrast Enhanced Computed Tomography (CECT) of the abdomen was suggestive of telescoping of D3-D4 and proximal jejunum without any defined lead point. Endoscopic polypidectomy was not feasible technically. The patient was planned for exploratory laparotomy with polypoid mass excision from the duodenum. On exploring the abdominal cavity, a rare reverse duodenoduodenal intussusception was found along with distal jejuno-jejunal intussusception. Both Intussusception was reduced easily. A polypoidal mass was palpable through the 4th part of duodenal wall and a 3-4 cm enterotomy was done just over the polypoidal mass. A 4*2 cm² polyp with a 1.5cm sized wide base polyp and 4*4*3 cm³ long stump was found in the duodenum, proximal to intussusception. The polyp was excised from the base & base was sutured using PDS 3-0 continuous locking manner and primary duodenal enterotomy was repaired in a single layer using PDS 3-0 in an interrupted manner. Specimen sent for histopathological examination, suggestive of tubulovillous adenoma with low-grade dysplasia without dysplastic changes in peripheral part of excised specimen of duodenum mucosa.



Figure 1 : Endoscopic Finding Suggestive Of Duodenal Polyp

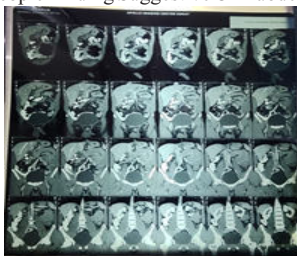


Figure 2: CECT Abdomen Suggestive Of Telescoping Of Duodenum



Figure 3 : A) Duodenal Intussusception B) Polypoidal Mass C) Jejuno-jejunal Intussusception



Figure 4: Polypoidal Mass

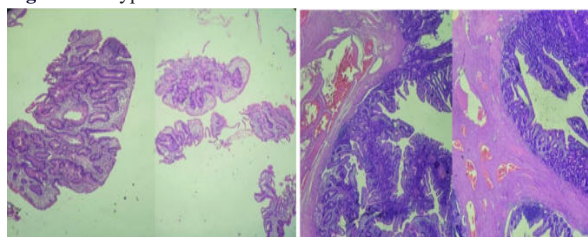


Figure 5: Juvenile Polyp

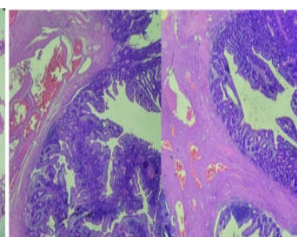


Figure 6: Duodenal Adenoma

DISCUSSION:

Entero-enteric intussusception is a condition in which a full-thickness bowel wall becomes telescoped into the lumen of the distal bowel [1]. Intussusception arises in the small bowel in two-thirds of cases [5]. In adults, an abnormality is usually acting as a lead point, usually a benign lesion: Meckel diverticulum, polyp, hamartoma, or a tumor [1,5]. Intussusceptions in adult patients are uncommon, accounting for only 5% of all cases [6]. We present a case of reverse duodenoduodenal & jejunojejunal intussusception with polypoid mass (tubulovillous adenoma) of the duodenum as a lead point. Duodenoduodenal intussusception is very rare because the retroperitoneal situation fixes the duodenal wall [1]. The most common clinical presentation is small

bowel obstruction, which may be acute, chronic, or intermittent; it only accounts for 1% of all small bowel obstructions. Other symptoms may include weight loss, fever, hemo-positive stools, or palpable mass [6]. Intussusception is usually diagnosed on CT, as CT is often the first modality for the investigation of prolonged abdominal pain from which these patients suffer [2]. Intussusception has a pathognomonic CT appearance: the bowel within-bowel configuration with or without contained fat and mesenteric vessels is pathognomonic [3]. It appears as a complex soft tissue mass with a three-ring configuration ("target sign"), consisting of the outer intussusceptions, the inner intussusceptum, and a central area of fat density representing the intussuscepted mesenteric fat; the mesenteric vessels are often visible within it [5]. The intussusception appears as a sausage-shaped mass, as a "target" mass, and as a kidney-shaped mass, depending on the angle of the CT beam vs. the intussusception. The curvilinear areas of low attenuation between the bowel walls represent the fat outside the duodenal muscle wall. This is a key feature to distinguish intussusception from mucosal prolapse into the distal bowel [1]. This differential diagnosis is important because intussusception carries a higher risk of complications of bowel ischemia, intraluminal bleeding, and bowel obstruction compared to mucosal prolapse [1]. Abdominal CT also allowed identification of the lead point, heterogeneously enhancing polypoid mass adjacent to a dorsal wall of the horizontal part of the duodenum, which was histologically proven Brunner's gland hamartoma. In our case, there was telescoping of D3-D4 without any lead point. Other imaging modalities used to diagnose intussusception are Ultrasonography and fluoroscopy. Ultrasonography may also demonstrate a form of the "target sign", but is usually more effective in paediatric patients. Fluoroscopy may be used also to treat intussusceptions but more commonly in paediatric patients [4]. However, in our case ultrasonography reveals normal findings. Intussusception can be complicated by bowel obstruction, ischemia, or bleeding, and therefore the underlying cause should be treated as soon as possible [1]. Treatment of intussusceptions in adults is typically surgical, unlike in paediatric patients [6]. In our case, the polypoid mass was acting as a leading point for duodenoduodenal intussusception and may lead to intussusception while the peristaltic movement of the bowel where jejunojejunal intussusception was incidental finding without any lead point.

CONCLUSION:

A duodenoduodenal intussusception is very rare type of intussusception specially reverse type of duodenoduodenal intussusception. However, one should suspect this diagnosis if there is epigastric pain with persistent vomiting in patients. So such cases should be advised early endoscopic examination to visualise the obstructing lesion or lead point in the case of duodenal intussusception and avoid complication arising from obstructing lesion in the duodenum.

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