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A rare case of deodeno-duodenal intussusception secondary to adenomatous polypoidal growth

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Abstract
Deodeno-deodenal intussusception is very rare entity due to retroperitoneal location of duodenum. Hereby we are presenting a rare case of deodenodeodenal intussusception secondary to adenomatous polypoidal growth arising from the deodenum. Very few numbers of caseses have been mentioned into literature which makes it one of the rare entity and to be considered for one of the differential which presents with upper GI obstruction.
Here we are presenting case of 40 yr old male with progressively developing dysphagia with intermittent episodes of vomiting. Without any history suggestive of maliganant growth with local or distant progression.
We managed case with all possible investigative modalities and definative treatment. Patient's post-operative status was uneventful.

Keywords: Dysphagia retroperitoneum growth intussusception

Introduction
Duodenal growth is one of the rare entity which presents as a upper digestive track obstruction. Retrosternal chest pain, abdominal fullness, recurrent post prandial vomiting and progressive deteriorating nourishment being a common presentation of obstruction. Here we are reporting a rare case of duodenum-Duodenal intussusception secondary to polypoidal growth in duodenum presenting as upper digestive track obstruction.
Being retroperitoneal in origin duodenum is fixed entity which makes it less likely to undergo intussusception and thus which makes it a rare entity.

Case report
40 yr old male came to surgical OPD with complaints dysphagia since 5 months. Insidious onset of dysphagia which progressively increasing initially for solid then liquid too.pt gave history that he experiences vomiting 1 -1/2hr after having meal which associated with burning chest pain. He added, he had weight loss throughout the course of above complaints
There was no history suggesting that something is sticking retrosternally, no h/o halitosis, hematemesis, malena. No h/o abdominal pain, fullness of abdomen after having meal.pt did not have any positive history s/o any family member suffered from malignancy.
On examination pt had average built with all vitals with in normal limits. On p/a examination e/o there is mild fullness in right hypochondriac and rt iliac fossa which moves with respiration craniocaudally and get disappears after straight leg raising test on inspection. On p/a palpation abdomen found to be non-tender non guarding and non-rigid. E/o soft, smooth, single growth in right hypochondriac region extended in RIF which having smooth margin and having craniocaudal movement on deep inspiration. There is no e/o any other abnormality noted.no e/o any organomegaly, lymphadenopathy. p/r examination was within normal limit.
Before coming to us pt underwent cect abdomen, ogd scopy followed with biopsy.
1st cect s/o-telescoping of pyloric part of stomach into deodenum lead proximal distension of stomach which forms rounded mass in rt lumbar region of about 6.1x6.6cm with invasion of gda mesenteric fat and vessels. Tributaries of smv is encicaling the mass. Mass is compressing upon head of pancreas, CBD lead to proximal dialatation of CBD about 9.4 cm ihbr slightly prominent. Mass compresses rt kidney lead to hun milder form. Mass also compressing the ivc. 1st ogd scopy s/o – complete pyloric obstruction secondary to ulcerative growth at pylorus. Obstructing and involving the lumen of pylorus. Biopsy take from growth.

1st hpe s/o- mild chronic gastritis

Then pt underwent full evaluation under our institute

Usg a+p- ill-defined lesion at pylorus measuring about 3.5x 5.1 cm with raised vascularity and partially occluding lumen, no e/o any clacific foci, maintaining fat planes with surrounding structure distal to lesion rest of deodenum found to be dilated with normal vascularity and peristalsis.

Cect a+p – bowel within bowel appearance with focal telescoping of 2nd part of deodenum and its vessels in 3rd part of deodenum in rt hypochondriac and in lumbar region s/o deodeno-Duodenal intussusception. Intussuseptum about 11.5 cm and intussucepiend about 16.2 cm. Bowel with normal enhancement. At lead pont e/o homogeneously emhancing bowel wall thickning about 8x2 cm possibly benign intramural neoplastic etiology leomyoma most likely. Mild dialatation of cbd noted measuring 8mm with central ihbr dialatation lhd-4mm rhd-3mm. Branches of gda supplying the lesion

Mri – bowel within bowel appearance with focal telescoping of pylorus, d1, d2 into d3, d4 of deodenum along with vessels in rt hypochondriac and lumbar region. Intussusception measures 10.9cm and intussusceptum 8.5cm with normal post contrast enhancement, this is supplied by branches of gda. Circumferential symmetrical enhancing bowel wall mass like thickening involving proximal jejunum in terminal part of intussusception with thickness of 2.9-4cm and length 8cm act as a lead point. Heterogenously hypointense on t2wi isointense on t1w1 no e/o diffusion restriction on dwi. S/o intense post contrast enhancement high vascular pedicle noted intussuscepient with luminal narrowing. Finding s/o benign intramural neoplastic etiology likely adenomatous polyp.

2nd Ogd Scopy

Oesophagus: la grade – d oesophagitis

Stomach- fundus normal with deformed pylorus

At d1 – polypoidal proliferative growth seen extending into d2. La grade esophagitis with Duodenal mass from which biopsy taken.

2nd hpe report- adenomatous polyp with mild dysplasia

Patient was planned to be managed with operative intervention with laproscopically assited duodenal resection and anastomosis.

Laproscopically abdominal cavity was assessed, deodenum was reached there was evidence of Duodenal thickening which was extending from d2 to proximal jejunum, which clearly suggestive of intussusception.

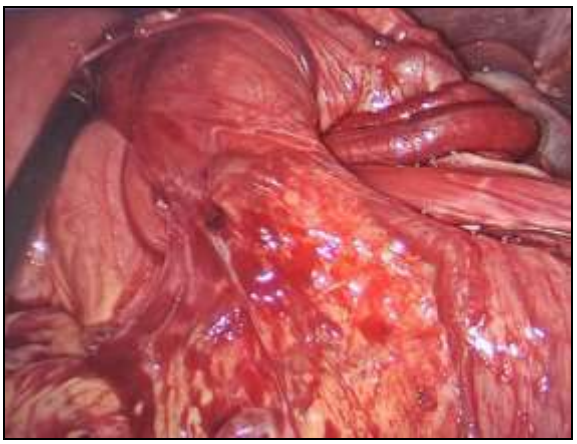

Fig 1: Laproscopic view of Deuodenodeodenal intussusception

It was found that further intervention with laproscopy was difficult so decision was made to convert into open surgical intervention. Duodenal intussusception which was extending till proximal jejunum. Rest bowel was absolutely normal without any abnormility.

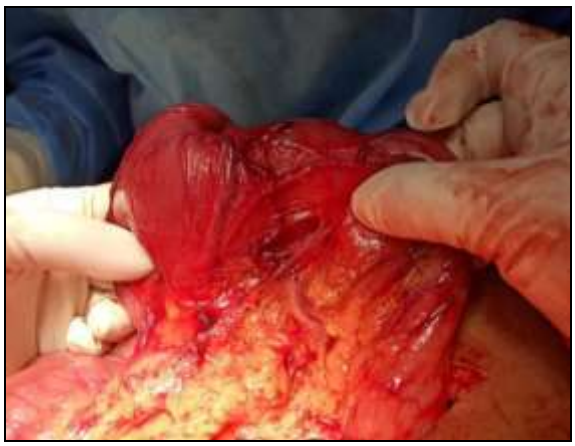

Fig 2: Laproscopic approach converted into open approach due to difficult dissection. Suggestive of D-D intussusception

Initially trial was given to reduce intussusception manually which was failed and then decision made to open up the deodenum proximally, so that lead point of intussusception get evident.

On opening the deodenum there was evidence of pedunculated polypoidal growth with small stalk arising from deodenum which draws duodenal mucosa along with

To intucessupt within deodenum it extending till proximal jejunum.

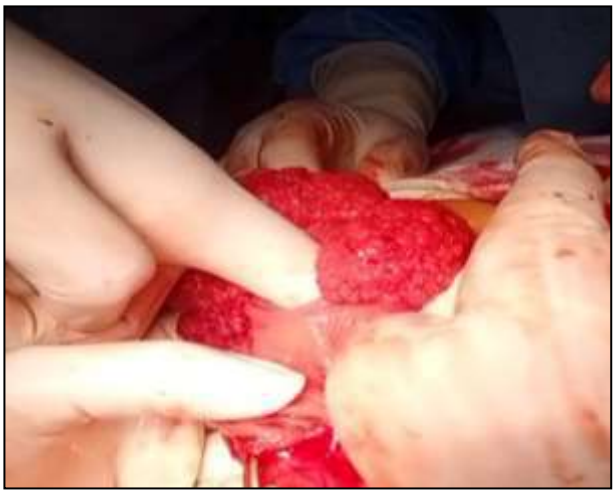

Fig 3: Intussuuception relived after enterotomy done as it was not reliving with conventional manuover

Intucusseption resolved and growth exised followed by deodeno-Duodenal anstomosis.

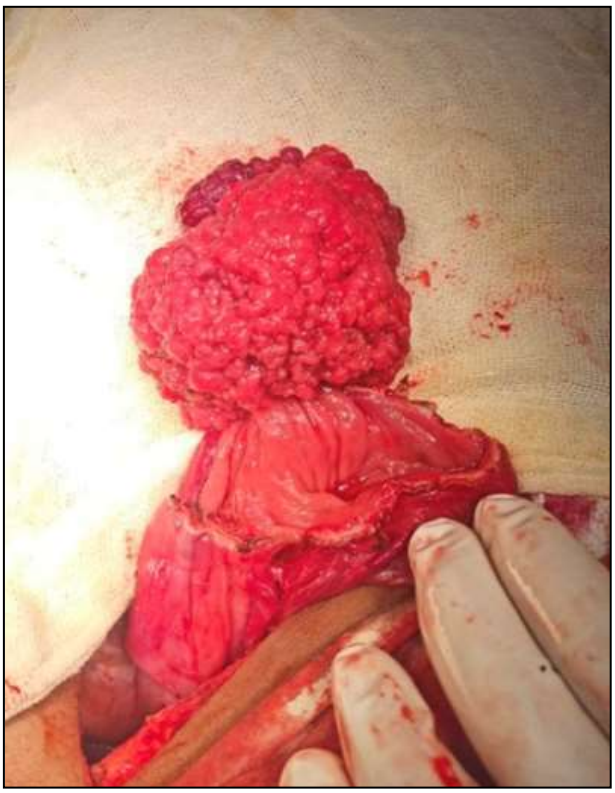

Fig 4: Polypoidal growth arising from duodenal mucosa which was the predisposing factor for intussusception in our case

Post-operatively patient shows good recovery without any complication. He was started with oral intake on post-operative day 9 successfully. Patient was discharged on post-operative day 15.

Fig 5: Gross specimen of duodenal polypoidal growth

Histopathology report of polypoidal growth traced was suggestive of adenomatous polyp with low grade dysplasia and secondary changes without evidence of malignancy.

Discussion

Upper GI track obstruction due to duodenal intussusception is being very rare entity due to fixed retro peritoneum position of deodenum. intussusception of the more distal small intestine is also rare when it occurs, the lead point is usually meckel's diverticulum, tumor, surgically created stoma, brunner's gland hammartomatous polyp [1, 2] condition presents due to full thickness invagination of proximal bowel into distal bowel as lead point, which presents as bowel obstruction with features of intermittent colicky type of abdominal pain with palpable abdominal lump, nausea, vomiting, anemia, malena [3].

Duodenal intussusception was first reported by sunderlin in 1830 and only 48 cases have been reported till 2005 then after deodeno Duodenal intussusception secondary to Duodenal polypoidal growth have not been reported [4]. Radiological findings such as "target sign" and "bowel within bowel" suggestive of intussusception of proximal bowel into distal bowel [5].

Surgical and endoscopic intervention should be performed in all patients to rule out malignant lesions that may acts as a lead point. Surgical management usually requires resection of the involved bowel segment. Reduction can be attempted in small bowel intussusception if segment bowel is viable and malignancy is not suspected [6, 7].

Conclusion

Though Duodenal intussusception being the rare condition it should be considered a Possibility for upper GI track obstruction which to be diagnosed on basis of advanced

radiological diagnostic modalities like CT, MRI. Endoscopic and open surgical intervention should be the treatment modality to cure the patient. At highly efficient set up it can be assisted with laproscopy which helps to anticipate the possible diagnosis and further decision of intervention.

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