CASE REPORT

GASTRODUODENAL INTUSSUSCEPTION SECONDARY TO GASTROINTESTINAL STROMAL TUMOR AS LEAD POINT – A CASE REPORT

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ABSTRACT: Gastrointestinal stromal tumours are relatively common tumours of gastrointestinal tract, most commonly found in the stomach. GISTs are generally asymptomatic but may present with epigastric pain, bleeding and features of gastric outlet obstruction. Adult intussusception is rare and the diagnosis can be delayed because it occurs infrequently, and its symptoms are long standing, intermittent, and nonspecific. Here we present a rare case of gastroduodenal intussusception with gastric stromal tumour as a lead point. Preoperative diagnosis was made on abdominal CT and confirmed by laparotomy and histopathology.

KEYWORDS: Adult intussusception, gastrointestinal stromal tumour

INTRODUCTION: Gastrointestinal stromal tumours (GISTs), previously termed as leiomyomas and leiomyosarcomas are relatively common tumours of the gastrointestinal tract occurring in up to 46% of stomachs in some post-mortem series [1].

Intussusception of the bowel is defined as the telescoping of a proximal segment of the gastrointestinal tract within the lumen of the adjacent segment. Malignant tumours are more common than benign tumours in the colon, although the reverse is true in the small bowel. The diagnosis of adult intussusception can be delayed because it occurs infrequently, and its symptoms are long standing, intermittent, and nonspecific.

CASE REPORT: Here we present a case of 38 year old female patient who presented with swelling in epigastric region and right hypochondrium since 4 months with history of intermittent epigastric pain and non-bilious vomiting. On examination the patient was having minimal tenderness and no palpable mass. An upper GI endoscopy performed, showed dilated stomach and no evidence of any stromal tumour. Abdominal ultrasound showed a dilated stomach with features of target appearance with well-defined heterogeneous round mass postero-inferior to the target appearance. Upper GI barium study showed dilated stomach with extrinsic impression seen as filling defect on the distal body of the stomach.

CT confirmed partial gastric outflow obstruction with characteristic features of intussusception and well defined enhancing soft tissue density lesion measuring 5.7x4.3x3.2 cm in the region of distal body of stomach along greater curvature. In spite of rarity, the diagnosis of gastroduodenal intussusception with probably GIST as the lead point was suggested.

Later the patient underwent laparotomy. Gastroduodenal intussusception with a mural gastric mass at greater curvature as the lead point was noted; subsequently distal partial gastrectomy along with excision of tumour and gastrojejunostomy was performed. There was no evidence of any metastatic spread. The patient made an uneventful post-operative recovery.

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Histology confirmed a solid, firm tumour measuring 5.5x5.0x3.0 cm, attached to the body near the greater curvature of stomach with two depressed ulcers. Microscopy revealed compactly arranged spindle shaped cells with elongated nuclei and eosinophilic cytoplasm along with few multi nucleated giant cells.

DISCUSSION: GISTs recently been reclassified as they arise from undifferentiated stromal fibroblasts rather than mature smooth muscle cells [2, 3]. These tumours are common between 5th and 6th decades of life, less common in under 40 years of age [4]. GISTs are benign tumours, range in size from under 0.5 cm to 30 cm in diameter. As the size increases, the risk of malignancy increases. More than 60 % of tumours over 10 cm are malignant [4].

Majority of patients with GIST are asymptomatic with large proportion being found incidentally at autopsy or during any other surgical procedures. In some cases the patient may present with abdominal pain, bleeding, occurring in 50% of benign and 85% of malignant tumours [5]. In some, the patient may present with complaints of weight loss, a palpable mass, dysphagia and vomiting [6].

Intussusception is the telescoping of one segment of the gastrointestinal tract into an adjacent one. This condition is uncommon in adults, caused by a definite underlying disorder such as a neoplasm or by post-operative condition [7].

Gastric intussusception is a rarely documented condition that occurs secondary to a mobile gastric tumour that prolapses into the small bowel. Various gastric lesions including adenoma, leiomyoma, lipoma, hamartoma, inflammatory fibrinoid polyp, adenocarcinoma, and leiomyosarcoma can serve as lead points.

Preliminary investigations for diagnosis are generally ultrasound and barium investigations. On ultrasound, diagnosis is made when the characteristic sign of target/bulls eye lesion is seen [10, 11]. Upper gastrointestinal contrast series may show a “stacked coin” or “coil-spring” appearance [12, 13, 14]. Intussusception is well diagnosed on CT which shows a pathognomic bowel within bowel configuration with or without contained fat and mesenteric vessels [8, 9].

There were uncommon documented cases of trans-pyloric prolapse of gastric tumours. This is a very rare case of gastroduodenal intussusception secondary to a gastric stromal tumour as a lead point, presented with mild epigastric pain and features of gastric outlet obstruction. Unlike other common causes of duodenal obstructions in adults such as periampullary and pancreatic carcinomas, GISTs have good prognosis. Though the findings on ultrasonography and barium series study were equivocal the final preoperative diagnosis was made only after CT and later confirmed surgically.

This uncommon case report demonstrates the value of preoperative cross-sectional CT imaging when the initial other imaging modalities were inconclusive.

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Image 1: Transabdominal ultrasound demonstrating well-defined Hypoechoic mass in the region of distal body of stomach.

Image 2: Transabdominal ultrasound transverse view of the intussusception showing characteristic target appearance.

Image 3: Barium study of upper GI tract showing a well defined smooth extrinsic indentation over distal body of stomach consistent with the tumour

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Image 4: CECT Abdomen at the level of intussusception showing characteristic “bowel within bowel” appearance. Pyloric part of the stomach (p), D1 segment of duodenum (d).

Image 5: CECT Abdomen distal to the level of intussusception showing well defined enhancing soft tissue density lesion. GIST (m), Stomach(s).

Images 6 and 7: CECT Abdomen coronal and sagittal sections at the level of intussusception demonstrating intussusception (i) and stromal tumour (m) causing extrinsic compression on the distal body of stomach(s).

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Images 8, 9 and 10: Intraoperative distal gastrectomy and post gastro-jejunostomy pictures along with resected specimen showing a stromal tumour (m) with ulcerations (*) and resected distal body of stomach(s).

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