

# Gastric duplication cyst-a case report

## Abstract

Commonest site for enteric duplications is small bowel and it is extremely uncommon for gastroduodenal region to get affected. Presentation maybe antenatal on anomaly scan or post natally when symptomatic due to complications. We report a 5month old girl who was brought with malena, abdominal pain and vomiting of two days duration with antenatal Ultrasound showing a cystic mass of unknown origin. On exploration, mass in the gastroduodenal region was found. Wide local excision with a part of the gastric wall & tail of pancreas was done. Histopathology was suggestive of gastric duplication cyst.

**Keywords:** gastric duplication, enteric duplication

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## Introduction

Among all enteric duplications, the ones occurring in the gastroduodenal region are rare accounting for only seven percent of all duplications.<sup>1,3</sup> We report an interesting presentation as acute abdomen which turned out to be because of gastric duplication cyst.

## Case report

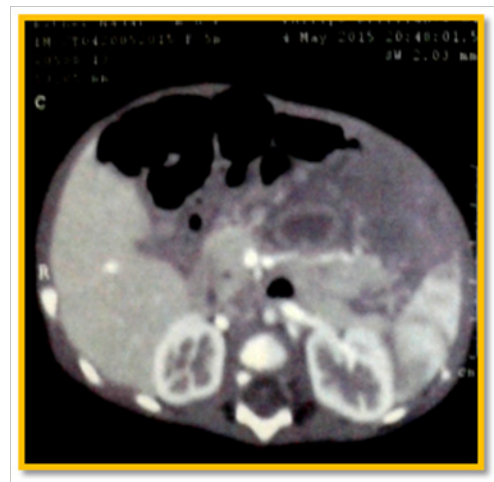
5 month old girl presented in emergency with malena, abdominal pain and non bilious, non- projectile vomiting of two days duration. Antenatal sonography at 33 wks of gestation had shown cystic lesion of 37x27x26 mm. On admission child was febrile. Abdominal examination revealed tenderness and guarding. X-ray abdomen was unremarkable. Ultrasound showed a large heterogenous hypoechoic lesion 4.4 x 3.5 cm just distal to splenic anterior pole, walled off by greater omentum. CT scan showed heterogenous hypoechoic lesion in the region of stomach of 4cm x 5cm size in the left hypochondrium and epigatric region (Figures 1&2). After initial stabilization, child was explored. There was a mass behind stomach adherent to transverse colon and tail of pancreas. Colon was dissected from stomach. It was difficult to differentiate whether it was neoplastic or not. Wide local resection of gastric mass along with part of wall & terminal pancreas was done. Stomach wall was closed in layers. Feeding jejunostomy tube was placed 15 cm away from DJ junction. Specimen was sent for histopathological examination (Figure 3&4). Post-operative recovery was uneventful. Histopathological examination revealed gastric mucosa and smooth muscles in the wall of cyst which confirmed the diagnosis of gastric duplication cyst. At six months follow up patient is asymptomatic and thriving well.

## Discussion

Gastro-duodenal duplications are rare<sup>1,2</sup> and account for approximately seven per cent of all gastrointestinal duplication cysts.<sup>3</sup> In the era of anomaly scan most of the cysts are detected antenatally, however locating organ of origin may be difficult. Symptomatic presentation depends on the size, position<sup>3</sup> and presence or absence of complications and include gastric outlet obstruction, abdominal pain or an abdominal mass. Embryo pathogenesis of enteric duplications cannot explain occurrence at gastroduodenal region as well as none of the theories quoted in literature have solved the mystery.<sup>1,3</sup>

Histopathological criteria for diagnosis of gastric duplication cyst include the wall of the cyst being contiguous with the stomach wall, the presence of smooth muscle surrounding the cyst and in

continuation with the gastric musculature, and lining of the cyst wall by epithelial, gastric, or gut mucosa of any type.<sup>4,8</sup>



**Figure 1** CT scan image.

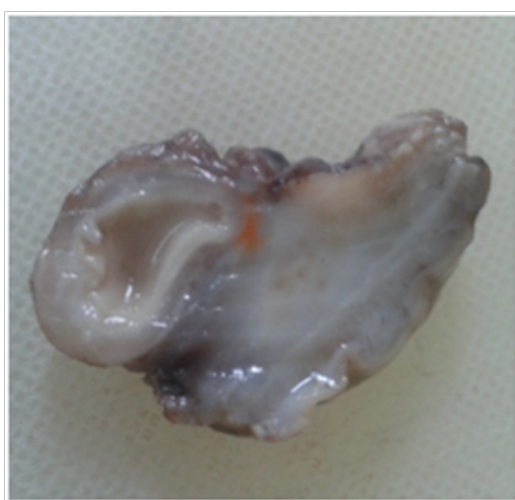


**Figure 2** Intraop Gastric mass.

CT imaging can precisely define location, size, and local tissue involvement. Typical appearance is that of cystic lesions with thick walls which often show contrast enhancement of the inner lining. Endoscopic ultrasound shows cystic lesion with hypoechoic muscle layer and echogenic internal mucosal layer.<sup>9</sup>



**Figure 3** Specimen.



**Figure 4** Cut section of specimen.

Complete excision is treatment of choice. Potential of these cysts to adhere to surrounding structures makes surgery intricate. Differentiation from neoplasia is also difficult intra-operatively. Marsupialization and stripping of the mucosal lining is the second option when it is not possible to find a plane between the cyst and the stomach. There are few cases in the literature successfully treated by laparoscopic resection.<sup>10</sup> Because of the potential for neoplastic transformation, it is recommended that duplication cysts be surgically excised.<sup>11</sup>

## Conclusion

Although rare, gastrointestinal duplication cysts are unique entities that are often detected after significant growth with development of compressive symptoms. They are often diagnosed postoperatively by careful pathologic examination, and treatment of choice remains complete surgical resection.

## Acknowledgments

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## Conflicts of interest

Authors declare that there is no conflict of interest.

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