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Case Report

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CONGENITAL ILEAL GASTRIC HETEROTOPIA PRESENTING AS PNEUMOPERITONEUM & PERFORATION IN A 2 YEAR OLD CHILD

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1. ABSTRACT

Gastric heterotopia can occur anywhere in the alimentary canal. Its occurance outside Meckel's diverticulum and intestinal duplication makes it a rare entity. It is rarely seen in small intestine, when it occurs it is located in duodenum. We report a case of a 2 year old child presenting as ileal perforation with pneumoperitoneum and severe anaemia.

KEYWORDS: perforation, ectopic gastric mucosa, pneumoperitoneum, Meckel's diverticulum.

1. INTRODUCTION

Heterotopic gastric tissue is well known to occur in alimentary canal. It is commonly seen in Meckel's diverticulum but very rarely in ileum.[1] Its reported incidence being 55-100%. Isolated cases of gastric heterotopias are of two types. It can be congenital as well as acquired. Acquired cases have been reported as a sequel of inflammation such as ileitis as a result of metaplastic change.[2] Congenital or true gastric heterotopias is a rare occurance outside esophagus and is due to abnormal embryological development.[3]

2. CASE REPORT

A 2 year old child presented with fever, lower gastrointestinal pain, vomiting and distention of abdomen. He had several bouts of pain since few days. No other significant history was present. His physical examination revealed severe anaemia and tenderness on right lower abdomen. His per abdomen examination revealed tenderness with abdominal guarding. Child was kept nil per oral, intravenous fluids and antibiotics were given. Correction of dehydration and electrolyte imbalance was done. Blood transfusion was also given to the patient. On x-ray of lower abdomen, massive pneumoperitoneum was found (fig 1). On USG, abdomen was full of bowel gases along with some free fluid. Emergency explorative laparotomy was done through right supraumbilical transverse incision. On exploration of gut, meckel's diverticulum was not found. There was a large ileal perforation measuring 2x2 cm with an intramural mass measuring 1.5x1.5 cm which was around 10 cm away from ileo-caecal junction (fig 2). Ileal resection along with removal of intramural mass was done with end to end anastomosis and abdomen was closed in layers. Post-operative period was uneventful.

On gross examination ectopic gastric mucosa presenting as 2x2 cm mass was found in ileum. A perforation was also identified in the surrounding area. On histopathological examination, there was mucosal and submucosal edema with transmural necrosis and congestion at the site of perforation. Gastric heterotropic tissue was found at the site of mass like lesion, containing well-formed gastric glands (fig 3,4).

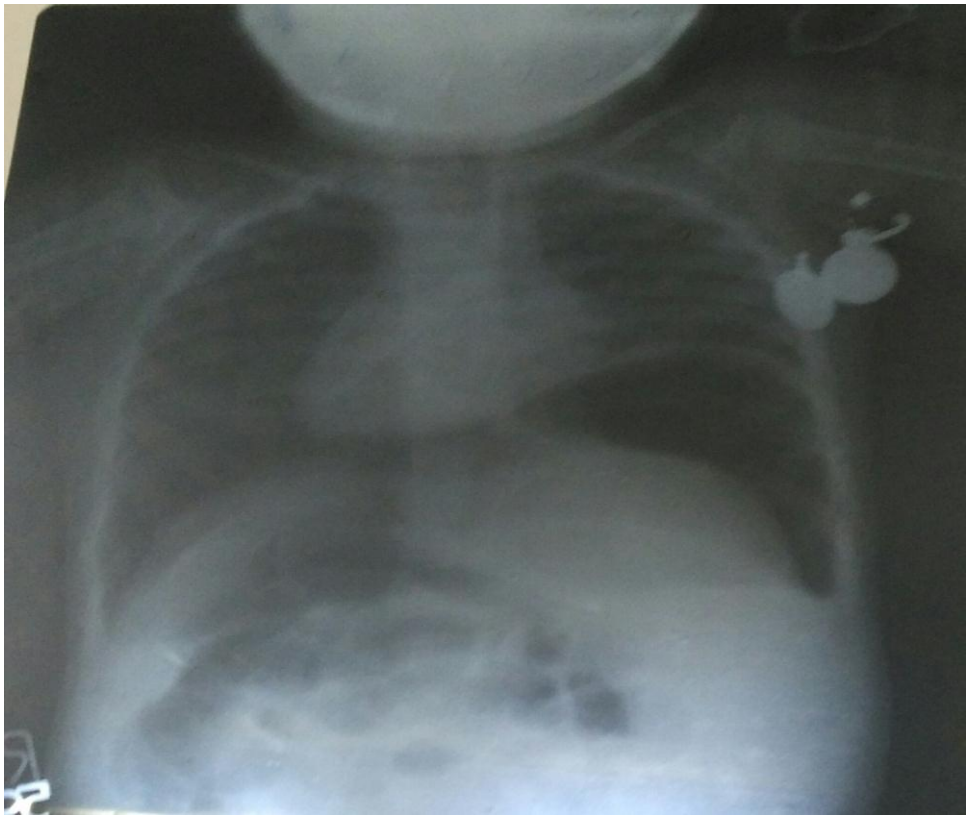

FIG-1 X-RAY film showing pneumoperitoneum due to ileal perforation

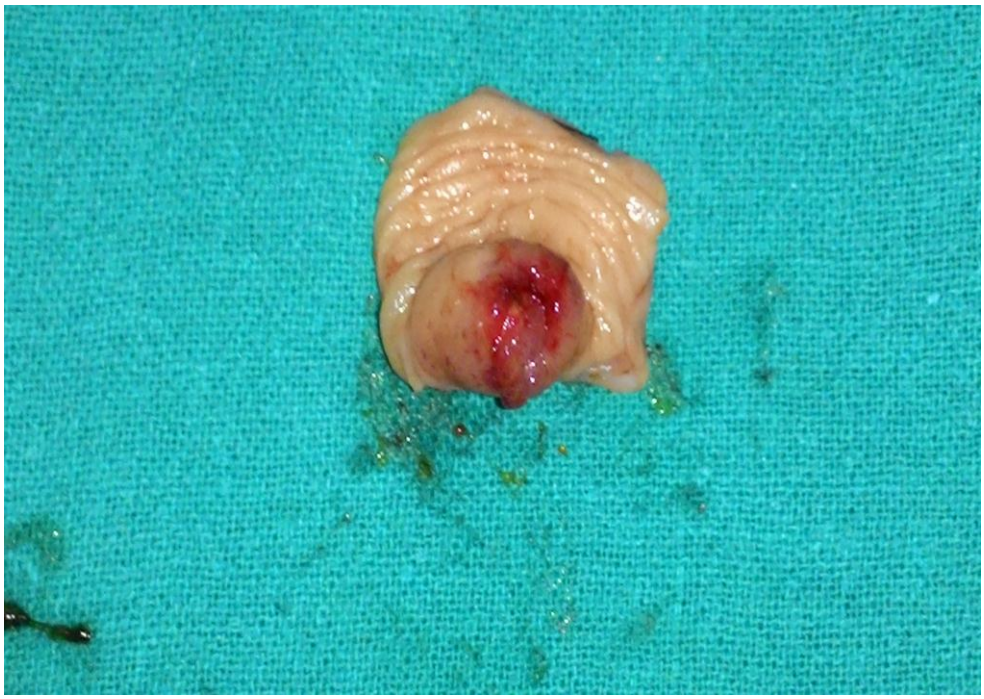

Fig-2 gross picture of the gastric mucosa within the ileum

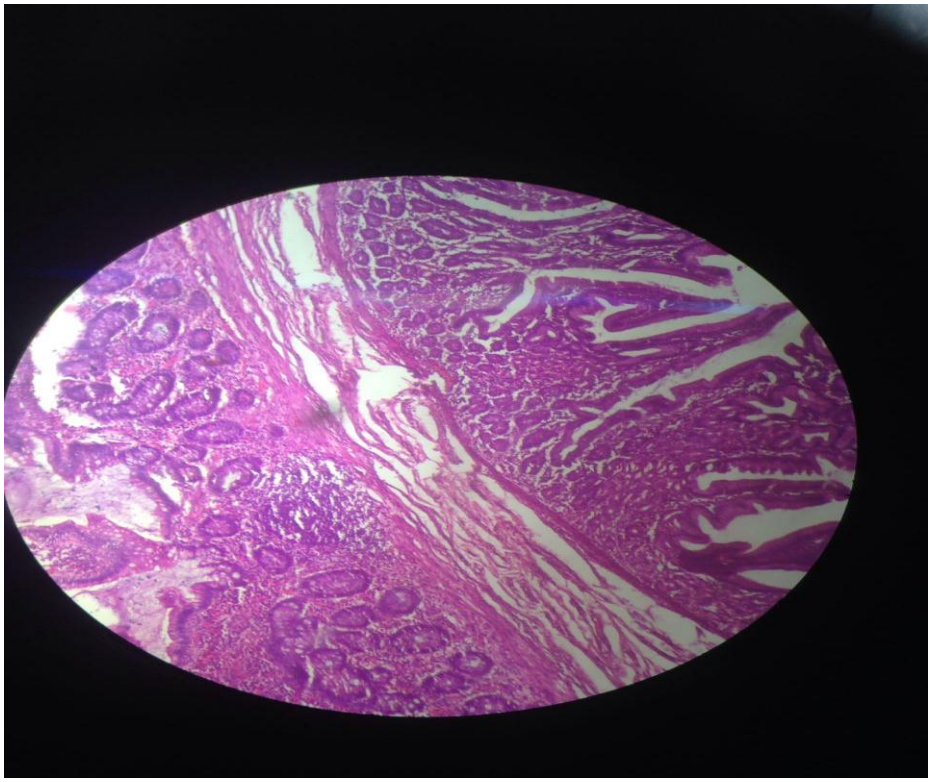

fig-3 – H&E stained section showing gastric mucosa in the intestine

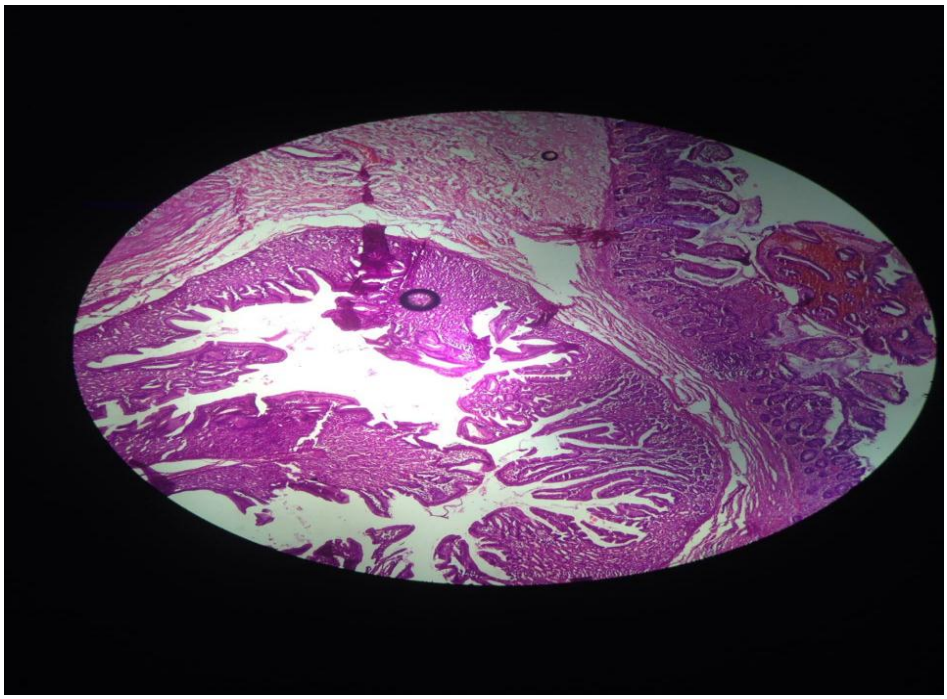

fig 4 showing gastric mucosa within the ileal tissue

3. DISCUSSION

Heterotopic gastric mucosa of the intestinal tract is an incidental gross or microscopic finding at sugery or autopsy.[4] It has been reported in locations namely tongue, esophagus, larynx, pancreas, urinary bladder, small intestine and colon.[5] Few cases have been reported in duodenum, but presence of congenital gastric heterotopia is rare in ileum. It can be congenital or acquired. The acquired variety is commonly seen in jejunum and ileum in inflammatory lesions such as enteritis. But the congenital variety is rarely found in ileum.[2] In the acquired heterotopia only mucus secreting cells are found. Chief cells and parietal cells are absent. But in the congenital heterotopia full thickness tissue is found with presence of completely structured gastric fundic mucosa. Chief cells and parietal cells are present in congenital heterotopias.[6] It mainly presents as bleeding ulcer or rarely as perforation. It is due to

secretion of acid pepsin by ectopic gastric tissue. Intestinal perforation and fistulalization is a common complication of gastric heterotopia.[7] In our case congenital ileal gastric heterotopic tissue presented as perforation with pneumoperitoneum and severe anaemia which may be due to occult bleeding.

In all reported cases of HGM in small intestine a definitive diagnosis was established by histopathological examination of the surgically removed specimens. Surgery was performed for acute complications such as GI hemorrhage and intestinal obstruction, but large gastric heterotopia presenting as large ileal perforation with pneumoperitoneum has not been reported so far in the literature. This is due to rarity of the disorder. A few case reports suggest that there is a risk of development of adenocarcinoma in the congenital heterotopic gastric mucosa as pluripotent cells from endoderm has potential for malignant transformation.[8],[9]

The diagnosis is therefore difficult and is based on analysis of combination of radiological methods, radioendoscopic, surgery and histopathology fundamentally.[10] The treatment is resection of intestinal segment containing ectopic with primary anastomosis.

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