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Antenatally Detected Cyst Presenting As Perforated Ileal Duplication Cyst In Newborn Period

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Abstract

Alimentary tract duplication is rare congenital anomalies that can occur in any portion of the gastrointestinal tract from mouth to the anus. Commonly have a fully developed smooth muscle layer, epithelial lining from alimentary tract and share common vasculature and wall with native alimentary tract. They might initially present with bleeding or obstruction symptoms or might be asymptomatic and discovered incidentally. Majority is diagnosed at the age of 2 years, with increasing number being diagnosed by prenatal ultrasonography. Duplications are benign condition, but risk of ulceration due to ectopic gastric mucosa is of concern. Here we are presenting an unusual case of antenatally detected enteric duplication cyst presenting as perforation in newborn period.

Keywords: NIL

Introduction

A male term baby born to a mother whose 23 week antenatal scan suggested intra-abdominal benign cyst's (3*1.8 cm on right side, 3.4*1cm on left side) suggestive of mesenteric/ Duplication cysts. Baby presented with complaints of abdominal distention and feed intolerance on post natal day 4. Emergency CT abdomen and pelvis revealed mild pneumoperitoneum, moderate ascites, over distended stomach and multiple small bowel loops. Baby was in septic shock, was resuscitated and posted for emergency laparotomy on the next day. Intraoperatively 2 enteric duplication cyst of size 10*20 cm in jejunum and 30*10 cm in ileum with meckel's diverticulum, perforation noted in ileal cyst. Resection of whole segment involving duplication cyst with end to end anastomosis of ileum and jejunum was done. Approximately 30cm of healthy small bowel is left with intact Ileo-ceacal junction and normal large bowel. Post operatively baby was resuscitated with IV fluids, antibiotics and TPN ivo Short bowel. NG feeds started on Post-op Day 4 and gradually increased, baby tolerated feeds well. Histopathlogical microscopic examination showed features of small bowel duplication with duplication cyst and gastric heterotopias, section from diverticulum showed feature's of meckel's diverticulitis and gastric heterotopia.

Discussion

Enteric duplication of small intestine account for one half of all duplications. They can be either tubular or cystic majority being cystic. They are found on mesenteric side and most commonly in distal ileum.

They most commonly present in early childhood secondary to vomiting, malena, hematochesia, mass per abdomen and tenderness. They can lead to obstruction due to volvulus and can act as a lead point for intussusceptions or can present with peritonitis secondary to perforation. In our case study we are presenting an unusual case of peritonitis secondary to perforation of Ileal duplication cyst in newborn period.

Ectopic gastric mucosa is seen in 20% of cystic and 80% of tubular duplications. In our case

histopathological report showed gastric heterotopias in duplication cyst which might be the cause of peptic ulceration leading to perforation.

Surgical management varies depending on location and nature of lesion. Segmental small bowel resection and anastomosis is the usual surgical approach. Rarely cystic duplications can be enucleated without sacrificing blood supply. In long tubular duplications preservation of length might be compromised with long segment resection of duplication. As a novel approach to prevent peptic ulceration mucosa of duplication is stripped to excise ectopic gastric mucosa. Another innovative approach to prevent short bowel syndrome is to anastomose duplication to normal bowel and allow drainage of its content .The rarity of this case calls for timely recognition through antenatal scans and prompt surgical intervention.

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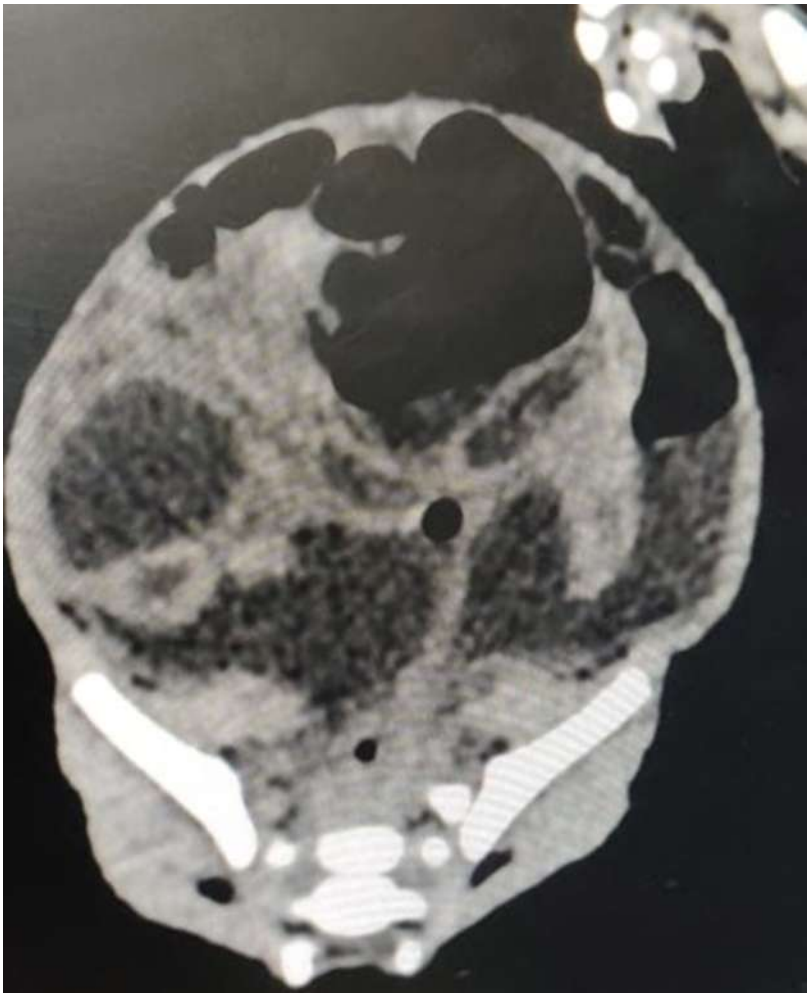
CT abdomen and pelvis image showing pneumoperitoneum



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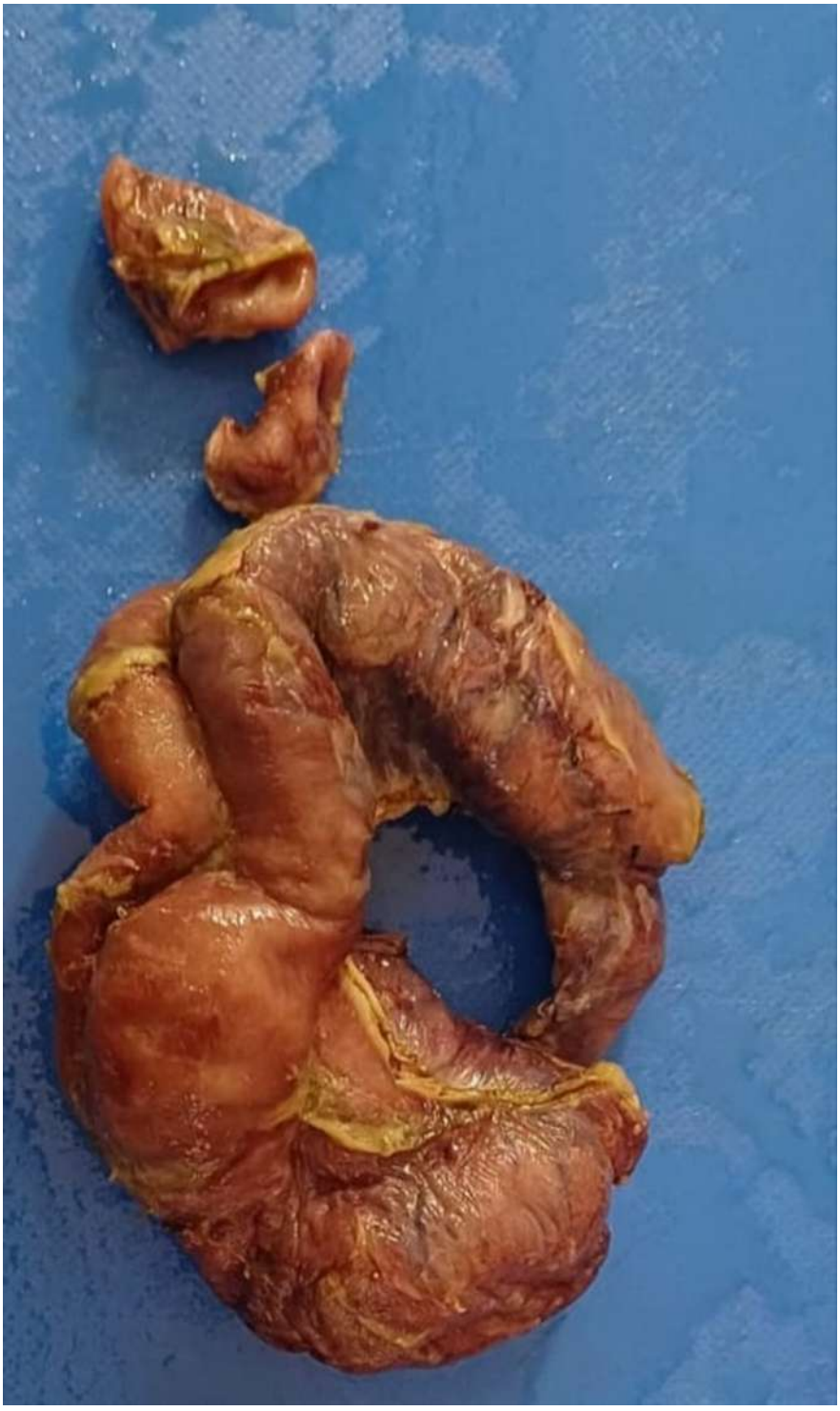
Resected Ileum And Jejunum Specimen Containing Enteric Duplication Cyst



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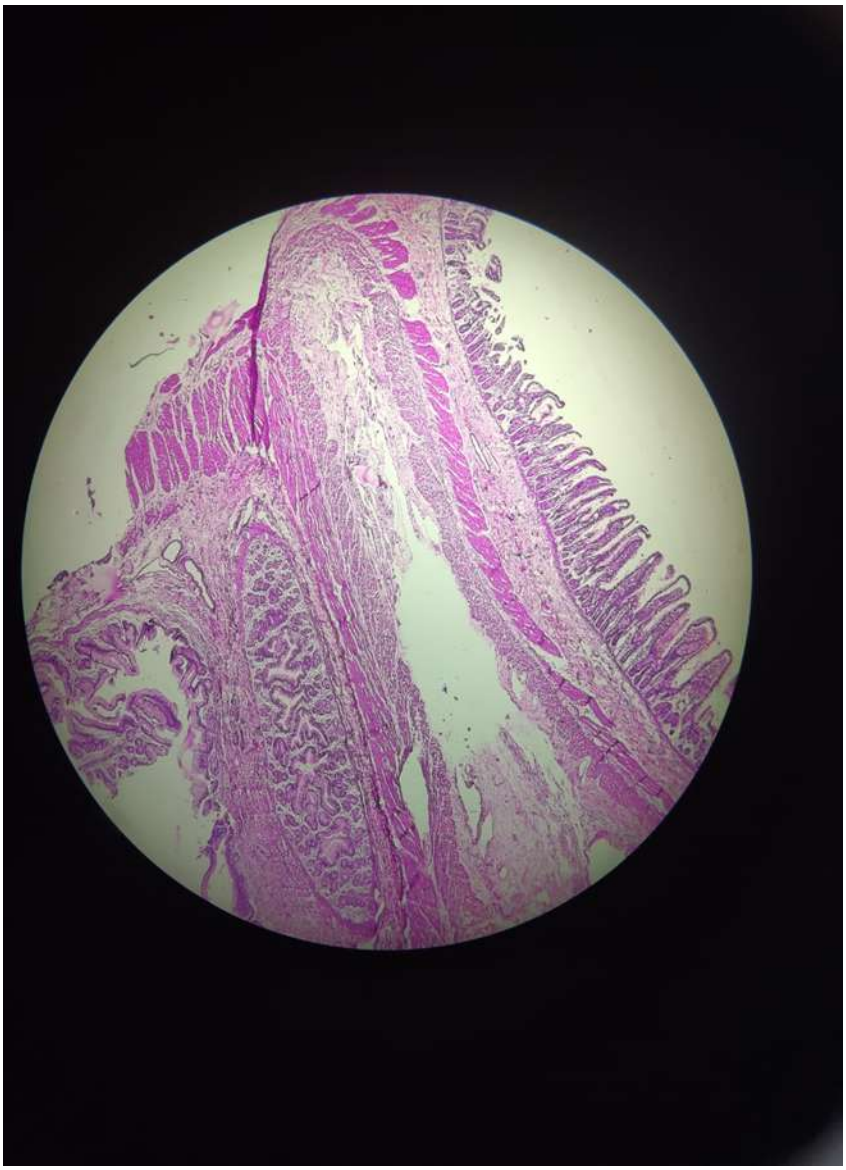
Histopathological Image Showing Common Wall Between Normal Bowel And Duplication Cyst With Gastric Mucosa In Cyst



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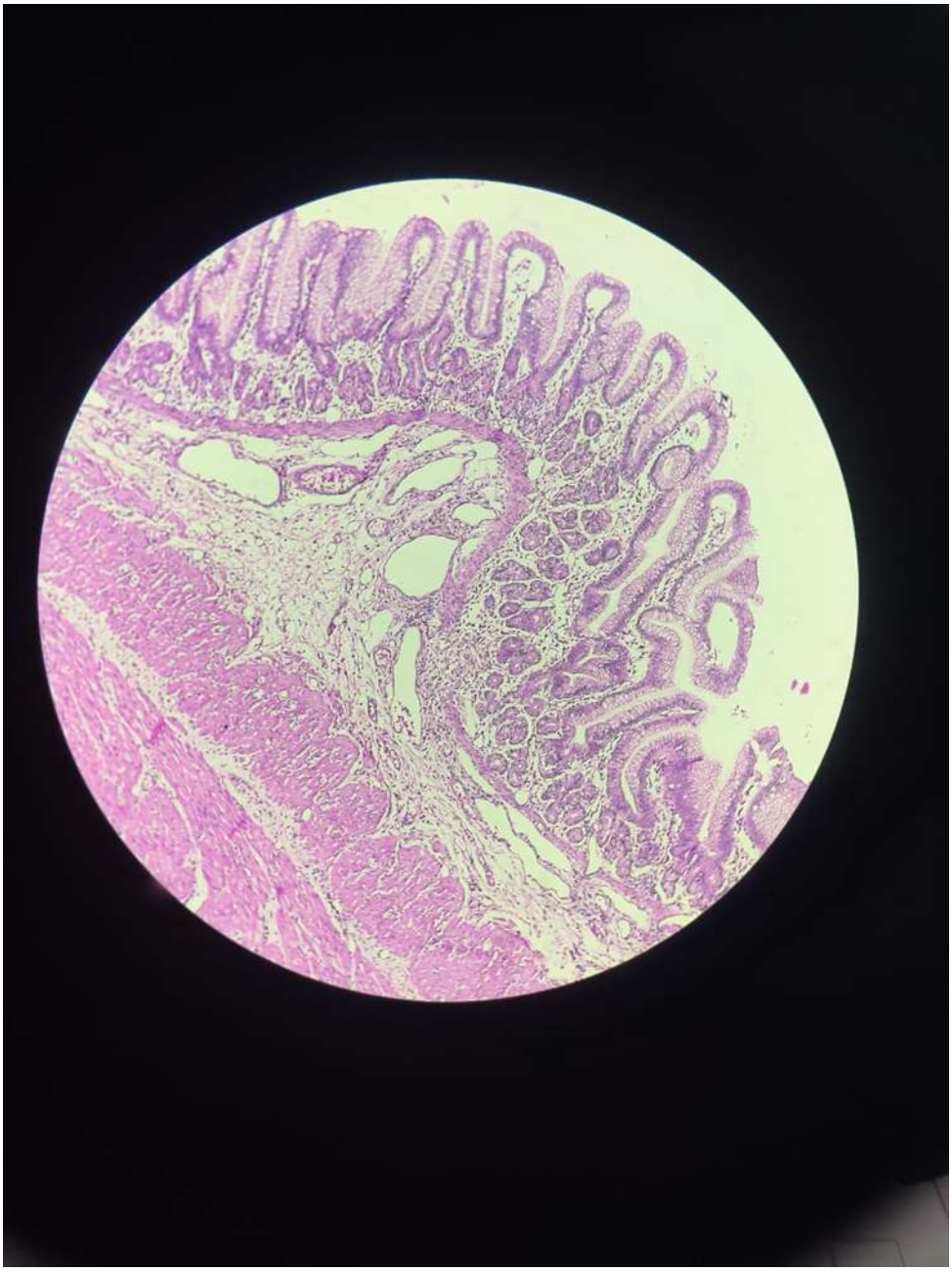
Histopathological Image Showing Meckels Divirticulitis With Ectopic Gastric Mucosa



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