



## Meckel's Perforation in a Toddler – A Case Report

### KEYWORDS

Meckel's diverticulum, perforation, toddler.

**\*Dr.Muthukumaran jagannathan**

Department of Paediatric surgery, Institute of child health and hospital for children, Chennai, Tamil Nadu – 600008. \*corresponding author

**Dr. Muthukumaran D**

Department of Paediatric surgery, Institute of child health and hospital for children, Chennai, Tamil Nadu – 600008.

**ABSTRACT** Bowel Perforation occurs in children, from newborn period till adolescence. The common causes of gastro intestinal perforation in toddlers are appendicular perforation, intestinal obstruction, enteric perforation and trauma {1}. We report a case of Meckel's perforation in a toddler with ectopic gastric and pancreatic tissue in the diverticulum Specimen.

### Introduction:

Bowel perforation occurs in paediatric age group due to various causes, Spontaneous perforations of stomach, duodenum, small intestine and colon occur as a result of ischemic necrosis {2}. Perinatal asphyxia, stress, hypoxia or shock lead to selective circulatory ischemia to GI tract. This in turn can precipitate a perforation. In Necrotizing enterocolitis, overzealous attempts of resuscitation with oxygen under high pressure also lead to perforation of GIT in neonatal period {3}. At later age appendicular perforation, obstruction, enteric perforation and trauma are the common causes of perforation peritonitis.

### Case presentation:

1 year old male child presented with abdominal pain and abdominal distension for 2 days. Child had fever with bilious vomiting and has not passed stools for 2 days. On examination, the child was sick, dehydrated, abdomen was distended with diffuse tenderness.

X ray abdomen showed air under the diaphragm and the Ultrasound abdomen revealed free fluid in the peritoneal cavity suggestive of perforative peritonitis. Laparotomy was done by right supra umbilical transverse incision. Meckel's diverticulum was found perforated at the tip (fig 1), and there was faecal contamination of the peritoneal cavity, resection of the Meckel's diverticulum with double barrel ileostomy was done. Post op period was uneventful. Biopsy of the specimen showed gastric mucosa and submucosal pancreatic tissue with exocrine and endocrine components (fig 2).

### Discussion:

Meckel's diverticulum usually presents as bleeding per rectum in children. It also presents as intestinal obstruction due to Meckel's band and due to intussusception of Meckel's diverticulum. However, perforation of the Meckel's diverticulum in children is relatively rare {4}.

The reported cases of perforation of the Meckel's was commonly due to ingested foreign body got impacted in the Meckel's diverticulum {2}. Spontaneous perforation of the Meckel's in toddler is very rare. Gastric or pancreatic secretions from the ectopic mucosa in the Meckel's diverticulum can lead to ulceration of the adjacent ileal mucosa {4}. In Meckel's diverticulum, 50% of the cases have ectopic gastric or pancreatic tissue. Out of which 60 to 65% constitute gastric mucosa and 5 – 16% were of pancreatic tissue {5}. In our case the specimen had both gastric and pancreatic tissues, which is very rare.

### Conclusion:

Reported cases of Meckel's perforation at the tip was mostly due to ingested foreign body which got impacted in the Meckel's diverticulum {5}. But in our case, the cause could be the secretions of the ectopic mucosa.

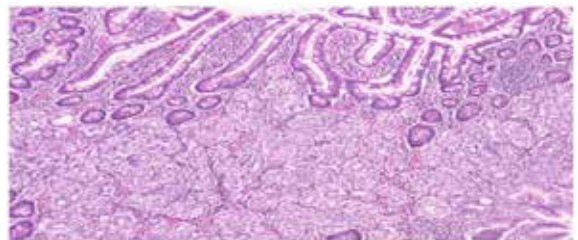


Fig 2. showing gastric and pancreatic mucosa in HPE



Fig 3 - Resected specimen, Meckel's diverticulum

### REFERENCE

- [1] Standring S, ed. Gray's Anatomy. The anatomical basis of clinical practice. 39th Ed., London, | Elsevier Churchill Livingstone. 2005; 1167. | [2] Lüdtkke FE, Mende V, Köhler H, Lepsien G. Incidence and frequency of complications and | management of Meckels diverticulum. Surg Gynecol Obstet. 1989; 169: 537–542. | [3] DiGiacomo JC, Cottone FJ. Surgical treatment of Meckel's diverticulum. South Med J. 1993; 86: | 671–675. | [4] Arnold JF, Pellicane JV. Meckel's diverticulum: a ten year experience. Am Surg. 1997; 63: | 354–355. | [5] Mackey WC, Dineen P. A fifty year experience with Meckel's diverticulum. Surg Gynecol | Obstet. 1983; 156: 56–64. |