

A CASE REPORT OF PERFORATED MECKEL'S DIVERTICULITIS IN NEWBORN INFANT

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Meckel's diverticulum is a congenital anomaly, a result of an incomplete obliteration of the vitelline or omphalomesenteric duct, which normally obliterated within the sixth to seventh week of embryonic life. Failure of the obliteration of this duct cause various anomalies, they are complete and incomplete omphalomesenteric fistula, Meckel's diverticulum, entero cyst and obliterated duct with persisting scar tissue between the intestine and umbilicus. Among these anomalies, the Meckel's diverticulum is the commomest presenting an incidence of 0.2-2 percent. Heldanus first described the ileal diverticulum in 1598, but Johann Freirick Meckel in 1808 described the diverticulum as being solitary, antimesenteric and congenital, located in the ileum at the site where the original yolk stalk coursed between the gut and the yolk sac. (1), (3), (5),

Complications associated with Meckel's diverticulum are derived from two sources, as a band or a blind pouch and the heterotropia involving the mucosa⁽³⁾. Clinically it is customary to described Meckel's diverticulum into two types, the

pathological type and the incidental type of which the first one causes complications and presents various symptoms and signs. (6)

In 1935 Greenbatt et al classified the Meckel's diverticulum into types according to modes of presentating, modified the classification by Stewart and Storey in 1962 into eight types. (7)

The peptic ulcer type presents symptoms as a peptic ulcer or melena due to the peptic ulcer presented in the Meckel's diverticulum.

The obstructive type: Meckel's diverticulum causes intestinal obstruction e.g. intussusception, volvulus etc. (2)

The inflammatory type: This type presents symptoms similar to the appendicitis, but Meckel's diverticulitis may cause cellulitis of the abdominal wall (Denicola 1954)

The umbilical type: The patient has an umbilical fistula. In the patient with parasitic infestation of the small bowel, the parasite may present in the umbilicus. (8)

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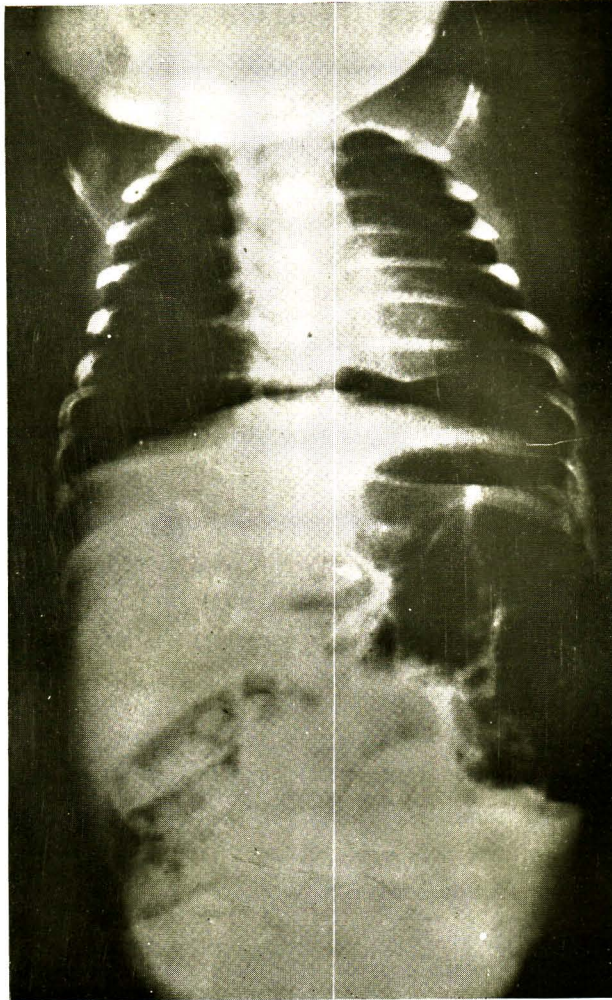


Fig. I.

The neoplastic type: is the rarest, the tumor is benign or malignant originated from the connective tissue, adenomatous tissue or heterotropic elements normally gastric pancreatic, colonic, duodenal jejunal and biliary tissue, but the commonest is the gastric tissue. These tissues may present in one element or mixed.

The foreign body type; in this type the foreign body impacted in the diverticulum.

The incidental group is the incidental

finding during exploration. Solomon and Malford (1964) reported a case with pre-operative diagnosis of perforate peptic ulcer. At exploration the operative finding was a ruptured jejunal diverticulum with Crohns' disease of the Meckel's diverticulum. (4)

The indeterminated group, in this group the patient clinically has to be operated but no abnormality presents except a normal Meckel's diverticulum.

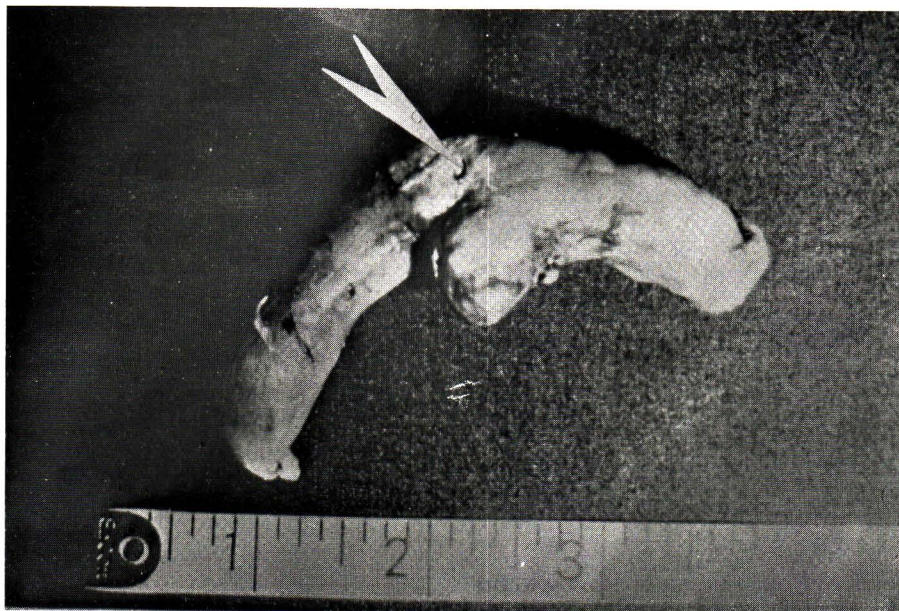


Fig. II The specimen showing perforation (pointed)

Case report H.N. 220734/13

A Thai male infant was born spontaneously in the forty weeks of gestation. He seemed well at birth and remained so until the twentieth day of life, when abdominal distension began. He was irritable and refused to eat. He has no vomiting and passed no stool. Mother kept the baby at home and was given some liquid medicine. These symptoms persisted for twelve hours. Three hours before admission he had low grade fever and marked abdominal distension. Finally mother brought the baby to Chulalongkorn hospital and was admitted.

Examination on admission showed thin, irritable, malnourished infant with abdominal distension. Respiration rate was 40 per minute, pulse rate 80 per minute and body temperature was 37.5°C. He was slightly dehydrate. E.E.N.T. was normal. Heart and lung were in normal limit. The abdomen was moderately distended and obscuring normal liver

dullness. There was no palpable mass or visible peristalsis. The gurgling sound was diminished. Rectal examination was normal. X-ray films of abdomen showed dilated loops of bowel with gas under dome of diaphragm (Fig. I). Hemoglobin was 12 gm. percent and normal urinalysis. The perforation of gut was diagnosed and emergency operation was done.

A transverse incision on the right lower abdomen one inch below the umbilicus is used. Operative finding is a Meckel's diverticulitis about 2 feet proximal to the ileocecal valve, perforation at its base with minimal soiling (Fig. II). Segmental resection of the ileum is done about one inch from each side of the diverticulum. The ileum is anastomosed in two layers by interrupted sutures, inner chromic cat gut and outer black silk. The post operative course is unremarkable, he passed the stool in the third day, stitches abscess presented and discharged on the fourteenth day after operation.

Pathological report : Acute Meckel's diverticulitis.

Due to its rarity, the diagnosed complications is due to the Meckel's diverticulum is clinically impossible. The acute peri-umbilical pain in a child or young adult is suggestive of Meckel's diverticulum complications and mostly peri-umbilical tenderness. In young adult first complication is the intestinal obstruction and chronic blood loss anemia from Meckel's diverticulum peptic ulcer in the child. (1) The normal Meckel's diverticulum is easily resected, wedge shape or simple excision is enough with minimal complication. If it is left and the complication presented, extensive excision is considered. In every abdominal surgery, routine exploration of small bowel should be done and simple excision, if the Meckel's diverticulum is presented.

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