

Tuberculous Perforation of Meckel's Diverticulum: A Case Report in Tertiary Care Hospital in North-East India.

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Abstract:

Meckel's diverticulum is a common congenital abnormality of gastrointestinal tract, resulting from an incomplete obliteration of the vitelline duct during the 5th week of the gestation. It may generally remain silent and asymptomatic but life threatening complications like perforation and intestinal obstruction can occur sometimes, making it important to know its detailed anatomy and pathophysiology.

We present a case of 41 years old male patient with complaints of severe generalised pain abdomen for 1 day with history of enteric fever 2 weeks prior to the onset of pain abdomen. X-Ray abdomen erect shows the presence of free gas under the right dome of diaphragm suggestive of Hollow Viscus Perforation.

Patient underwent Exploratory Laparotomy and diagnosed with Meckel's diverticulum perforation. Primary repair of the defect done, tissue biopsy sent for HPE which was diagnosed as tuberculous perforation of the Meckel's diverticulum.

Keyword: Meckel's diverticulum, Tuberculosis, perforation, congenital abnormality.

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I. Introduction:

Meckel's diverticulum was described by Fabricius Hildanus in 1598. It represents the patent intestinal end of the vitellointestinal duct. In 20% of the cases the mucosa contains heterotopic gastric, colonic, or pancreatic tissue. The various anomalies include, a fibrous band from distal ileum to the anterior abdominal wall, an umbilical-intestinal fistula, a mucosa lined cyst, or sometimes an umbilical sinus and Meckel's Diverticulum.¹ Meckel's diverticulum is the commonest congenital gastrointestinal anomaly. It was described in detail by Johann Friedrich Meckel in 1808 and thus bears his name. It is a true diverticulum, consisting of all intestinal layers and is due to the persistence of the vitellointestinal duct. It is present in approximately 2% percent of the population with a male : female ratio of 2 : 1.² Although Meckel's diverticulum occurs equally in both the sexes, it may cause complications more frequently in males. The diagnosis of the Meckel's diverticulum can be made by Technetium scan. The material used is Technetium-99m Pertechnetate which is injected intravenously; over time it accumulates in the gastric mucosa. When Meckel's scan is non-diagnostic or in patients with non-bleeding presentations, ultrasonography is perhaps the most useful non-invasive method of reaching a diagnosis.

II. Case Report

HISTORY:

A 41 years old male presented with severe and generalised pain abdomen, loss of appetite, nausea and vomiting for 1 day with a history of Enteric fever 2 weeks prior to the onset of pain abdomen. No history of Tuberculosis, Diabetes, Asthma, weight loss, no history of previous abdominal surgery

EXAMINATION:

Per Abdominal: Restriction of respiratory movements of abdomen

Generalised guarding and rigidity present with tenderness

Obliteration of the liver dullness present

Bowel sounds absent

INVESTIGATIONS:

- TLC- 12,000
- X-Ray Abdomen Erect which shows the presence of free gas under the right dome of diaphragm
- Rest of the investigations within normal limits

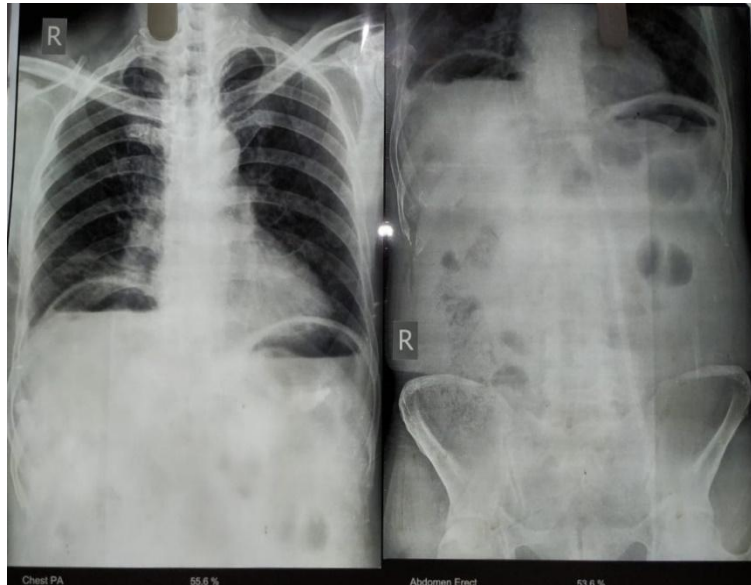


Fig 1: X-ray Abdomen Erect showing free gas under diaphragm

TREATMENT:

Exploratory laparotomy and primary repair of the perforation done under General Anesthesia



Fig 2: Intraoperatively perforated Meckel's Diverticulum

Postoperatively the excised tissue was sent for HPE and diagnosed as a case of Meckel's diverticulum perforation due to Tuberculosis

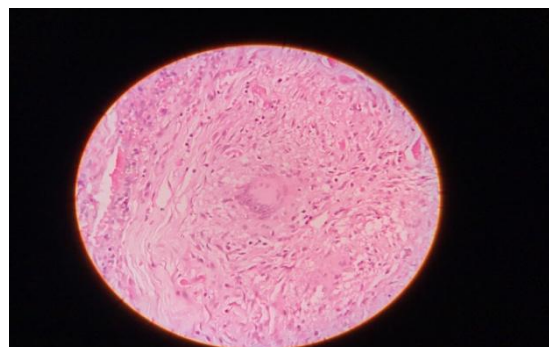


Fig 3: Histopathological examination of the excised specimen showing Epithelioid cells with caseation necrosis suggestive of Tuberculosis.

III. Discussion

- Meckel's diverticulum is a remnant of vitello intestinal duct.
- "Rule of two" is characteristic for Meckel's diverticulum.
- Hemorrhage is the most common complication in children.
- Obstruction due to Meckel's diverticulum is the most common complication in adults.
- The various anomalies includes, a fibrous band from distal ileum to the anterior abdominal wall, an umbilical-intestinal fistula, a mucosa lined cyst, or sometimes an umbilical sinus of these the commonest anomaly is Meckel Diverticulum.
- The management of symptomatic Meckel's diverticulum comprises of surgery by wedge-resection.

IV. Conclusion

Tuberculous perforation of the Meckel's diverticulum is a rare but noteworthy condition. Synchronous perforation of the Meckel's diverticulum due to Tuberculosis with associated history of Typhoid fever is also uncommon. Emergency laparotomy and resection of the affected small bowel segment including the diverticulum is the treatment of choice for management.

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