

A Rare case of Intestinal Obstruction due to Meckel's Diverticulum with band in Post operative Appendectomy Boy

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ABSTRACT

Meckel's diverticulum is the commonest type of congenital anomaly of small intestine, commonly seen in 2% of the population, seen two feet away from the ileo-caecal junction, with 2 cm in length and usually consisting of two types of heterotrophic mucosa. In our case report, we deal with a presentation of the condition in post appendectomy boy, clinical course, surgical management and post-operative care for meckel's diverticulum with band. We also briefly review on the latest literature and investigative modalities for the conditions along with best management modalities.

Keywords: Meckel's diverticulum, explorative laparotomy

INTRODUCTION

Meckels diverticulum is the commonest encountered congenital anomaly of the small intestine, but its presentation with a band is one of the rarest entity. First described by Fabricius Heldenanus in 1650 subsequently by Levator in 1671 and then Ruysch in 1730. However, it was described in detail by Johann Meckel in 1809 and bears his name^[1].

Usually results from the abnormal closure of omphalo-mesenteric or vitelline duct, located on the anti-mesenteric border of the distal ileum 45-90cms away from ICJ. Rutherford and Akers studied 147 surgical specimens and found heterotopic tissue in 57%.^[2,3] Types of heterotrophic tissues found were gastric, pancreatic, colonic, jejunal and duodenal. Meckel reported an incidence of 25%, whereas

Michas and his colleagues reported an incidence of 25% to 33%.^[4]

CASE REPORT

A 11 years old boy presented to the emergency department complaining sudden distension of abdomen since one day, was operated for open appendectomy on the prior day at local private clinic. Distension was sudden in onset, associated with diffuse pain involving all quadrants of abdomen, didn't pass stools and flatus. Examination revealed guarding, rigidity and increased bowel sounds. Previous appendectomy scar noted healthy no swelling noted around the scar. X-ray erect abdomen showed multiple air fluid levels, ultrasound showed multiple dilated ileal loops with moderate free fluid in peritoneal cavity. Complete haemogram, and



Figure 1: Showing meckel's diverticulum with gangrene of small bowel



Figure 2: Showing meckel's diverticulum with band

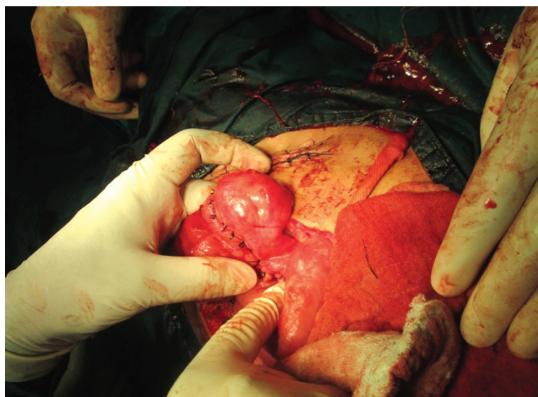


Figure 3: Showing end to end anastomosis of small bowel

other blood investigations where in normal limits.

Emergency explorative laparotomy was done showing hemorrhagic fluid in the peritoneal cavity, with meckel's diverticulum 50 cms away from the Ileo-cecal junction with band strangulating the distal ileal loops, Gangrenous small bowel of about 30 cms. Band release following resection of the gangrenous bowel was done and end-to-end anastomosis with non-absorbable double layer interrupted sutures was done.^[6] Post operative period was uneventful patient responded well to medication and was discharged on 10th post operative day.

DISCUSSION

As quoted by Charles W. Mayo "Meckel's diverticulum is frequently suspected, often looked for and seldom found". They are entirely benign, incidentally discovered in a laparotomy, autopsy. Generally presenting features

are Lower GI bleed, with anemia.^[5] The cause being the chronic acid ulcer next to diverticula due to gastric mucosa lined diverticula. It is found to be associated with intestinal obstruction due to band, volvulus, intussusception, regional enteritis, herniation, calcifications, tumors such as angioma, lipoma, leiomyoma, fibroma.^[1]

Adults diverticulitis may sometime mimic the features of appendicitis, hence when operated for either of the one the other has to be operated. A standard radiological investigation has proved difficult for the diagnosis of meckel's diverticulum. Dalinka and Wunder (1973)^[9] found radiological abnormalities in only 10 - 17 patients and in only 3 patients was the diverticulum demonstrated radiologically. Sonographically they may mimic findings of appendicitis.^[11] Routine Doppler sonography revealed anomalous vessels and signs of inflammation on the wall of meckel's diverticulum.^[11]

Superior mesenteric artery arteriography has showed up accuracy of 59%.^[10] Jewett et al identified uptake by meckels diverticulum on abdominal scans after injection of sodium pertechnetate Tc-99m.^[4] Scintigraphy by 99mTc pertechnetate scan has showed reasonable sensitivity to the ectopic gastric mucosa with accuracy of 85-90%. Laparoscopic examination is safe and efficient way of localizing lesion but as compared to traditional imaging studies it remains as an invasive procedure hence it is not included in initial step diagnosis.^[12-13]

Management is mainly by surgical intervention with resection of the diverticulum with anastomosis of small bowel. But, in conditions like gangrenous bowel as seen in above case viability of the bowel is to be looked for following with saving of the viable bowel with resection and anastomosis. Surgery followed with proper postoperative care and antibiotic support showed fruitful results.

CONCLUSION

Meckel's diverticulum should be looked out for in cases of appendicitis and if found it should be removed. Incidentally detected diverticulum in laparoscopy or major abdominal surgery has to be resected.^[7,8]

CONFLICT OF INTEREST

The authors declared no conflict of interest.

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