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**Case Report**

# Mimicking T- shaped giant meckel's diverticulum: another rare anatomical variant complicating small bowel obstruction by adhesions

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## ABSTRACT

We report case with Meckel's diverticulitis complicated by adhesive intestinal obstruction. An adolescent of 13-yr-old boy with history of recurrent right sided lower abdominal pain and vomiting for two days. According to his mother he had been suffering this type of pain intermittently for last three years which was treated conservatively. This time the pain was out of proportion therefore she reported in tertiary hospital. On examination patient was tender at right iliac fossa region with abdominal guarding. CT scan of abdomen revealed multiple fluid-filled, dilated proximal bowel loops. Meckel's diverticulum was not suspected until diagnostic laparoscopy was performed. Patient was converted to open laparotomy where the giant (13 cm sized), narrow base mimicking T-shaped Meckel's diverticulum and inter bowel loop adhesions near terminal ileum were seen. About 20 cm affected ileal segment with Meckel's diverticulum resected and primary end to end anastomosis performed. The postoperative course remained uneventful. Histopathology report confirms the inflammation of Meckel's diverticulum. Significance of this type of Meckel's diverticulum is its T-shaped mimicking appearance with giant size body and narrow base and was manifested with recurrent sub occlusive intestinal obstruction in the period of three years. It is the second ever reported case in English journals.

**Keywords:** Adhesions, Intestinal obstruction, T-variant Meckel's diverticulum

## INTRODUCTION

Meckel's diverticulum is an uncommon cause of acute abdominal pain and small bowel obstruction accounting 25% in children.[1]

Giant Meckel's diverticulum is relatively rare and is associated with more severe complication especially intestinal obstruction.[2] Meckel's diverticulum can produce intestinal obstruction. Symptoms may vary from intermittent recurrent sub occlusive episodes (as in our patient) to frank occlusion with strangulation if complete volvulous occurs.[3] The factors predisposing to intestinal obstruction in the presence of Meckels diverticulum is either its excessive length, narrow base, inflammation, axial torsion, meso diverticular band, intussusceptions, volvulous and enterolith.[4,5]

The overall life time risk of complication is 3.7% at the age of 16 years decreasing to zero by 76 years of age.[6]

We present a case of giant mimicking T-shaped Meckel's diverticulitis with adhesive small bowel obstruction which was formed probably during the recurrent attack of Meckel's diverticulitis; had been causing sub-acute intestinal obstruction at the period of three years.

## CASE REPORT

A 13-yr-old boy with history of recurrent right sided lower abdominal pain and 2 episodes of non-projectile vomiting for two days. The pain was moderate to severe in intensity and continuous in nature. It was associated with one spike of low-grade fever. No history of constipation or abdominal distension. According to his mother he had been suffering pain in right iliac fossa region intermittently for last three years which was treated conservatively. This time the pain was out of proportion therefore she reported in tertiary hospital. On examination patient tachycardia, febrile of 99.9º F and was tender at right iliac fossa region with abdominal guarding.

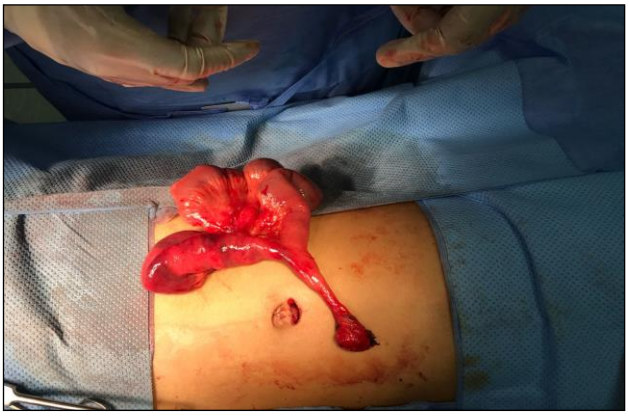

**Figure: 1 Mimicking t-shaped Meckel's diverticulum.**

His blood report was normal while x-ray abdomen showed multiple fluid levels. CT scan abdomen revealed phlegmonous mass at right iliac fossa region and multiple fluid-filled, dilated proximal bowel loops. Patient was kept on conservative treatment early rehydration and broad-spectrum antibiotics and analgesics were started. After adequate resuscitation diagnostic laparoscopy performed which revealed presence of Meckel's diverticulum and inters bowel loop adhesions.

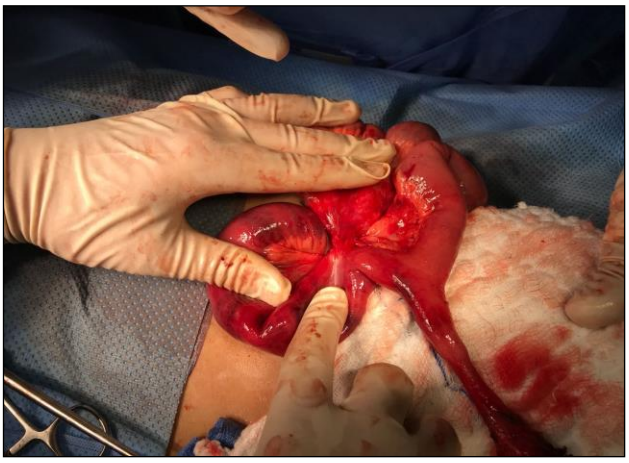

**Figure: 2 Meckel's diverticulum with inter bowel loop adhesions.**

Patient was converted to open laparotomy where the giant (13 cm sized), narrow base mimicking T-shaped Meckel's diverticulum see figure: 1 and inter bowel loop adhesions near terminal ileum see figure 2 were seen. About 20 cm affected ileal segment with Meckel's diverticulum resected and primary end to end anastomosis performed. The postoperative course remained uneventful. Histopathology report confirms the inflammation of Meckel's diverticulum.

## DISCUSSION

Giant Meckel's diverticulum mimicking T-shaped anomaly is first described in August 2018.[4] We report similar type of anomaly as a second ever case occured in Pakistan. In above two studies extremes of age difference were seen i.e. 58 years old man in the above study while to us there was a 13 years old adolescent boy. In compare to present study, other studies also shown giant (1.5cm) narrow based Meckel's diverticulum with adhesions as the cause of intestinal obstruction.[6,7] In contrast to study by Paul V et al present study showed adhesions the cause of intestinal obstruction which was formed probably during the recurrent episodes of Meckel's diverticulitis causing sub-acute intestinal obstruction in the period of three years.[4] Sub-acute intestinal obstruction has been reported in the study in 2009 as well.[3]

The diagnosis of Meckel's diverticulum is more challenging because of non-specific symptoms and long list of differential diagnosis in both children and adults.[8] Comparative to the study done in Japan in present study Meckel's diverticulum wasn't diagnosed until laparoscopy performed.[9]

Surgical treatment of Meckel's diverticulum varies from simple excision in transverse axis of ileum to avoid luminal Stenosis to segmental resection and anastomosis reserved for complicated cases. In our case later procedure was performed comparative to the study done in India.[10]

## CONCLUSION

We report a very rare case of mimicking T-shaped giant Meckel's diverticulum with adhesive intestinal obstruction. Early diagnostic laparoscopy was employed to prevent substantial risk.

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