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Research Paper

Strangulated Intestinal Obstruction in a 24-year-old Female – An Interesting Case Report

Medical Science

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ABSTRACT

A young female presented with severe abdominal pain and constipation since the last 5 days. On evaluation and diagnostics, she was suffering from Acute Intestinal Obstruction. Exploratory Laparotomy was performed and a gangrene of the small bowel was noted. An Ileo-Cecal Volvulus was also seen due to the rotation of the bowel around a Vitello-Intestinal Band. A Meckel's diverticulum was also noted in the gangrenous bowel loop of the terminal ileum. The management of this case along with this rare presentation is discussed in this interesting case report.

Strangulated Intestinal Obstruction in a 24-year-old Female – An Interesting Case Report

A 24-year-old female presented with severe pain per abdomen since the past 3 days. She was admitted in a primary care centre for initial management and diagnostics. A CT scan of the Abdomen and Pelvis was done which showed a small bowel obstruction. The patient was shifted to a tertiary care hospital for further management.

On examination, the patient was febrile with a temperature of 101 F. Her pulse rate was 100 per minute and blood pressure was normal. Her urine output was low due to dehydration and her nil by mouth status. She was started on intravenous hydration and routine laboratory blood tests were sent on an emergency basis. On clinical examination, her abdomen was tender and distended. Bowel sounds were absent. She had not passed stools since the last 5 days. Rest of the systemic examination was normal.

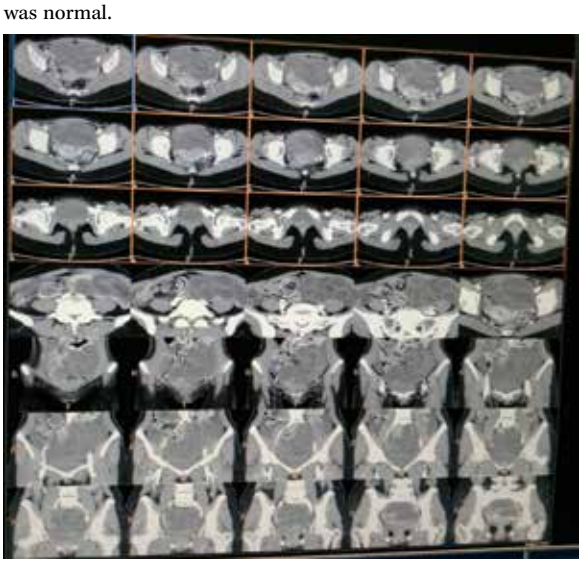

Fig.1 The CT scan of the Abdomen and Pelvis with contrast shows dilated bowel loops with no contrast seen in the bowel lumen suggestive of Acute Intestinal Obstruction.

The patient was posted for exploratory laparotomy. On exploration of her abdominal cavity, a gangrenous loop of the small bowel was noted.

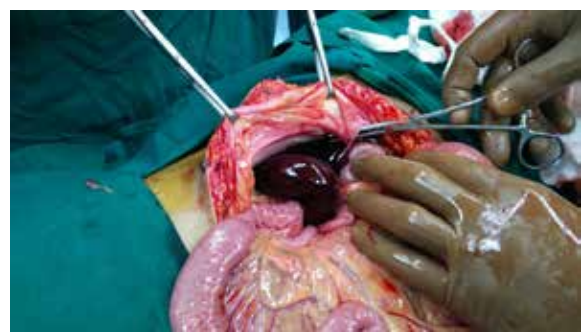

Fig.2 Gangrenous Loop of Ileum seen on Laparotomy.

An Ileo-Cecal Volvulus was seen, which is the rotation of the bowel loops around a point causing strangulation and loss of blood supply to that segment of the intestines leading to gangrene. The Volvulus was caused by a Vitello-Intestinal band, which is an embryological remnant due to which the distal ileum had twisted around it and become gangrenous. A resection of the gangrenous bowel loop was done along with the de-rotation of the small bowel. A side-to-side anastomosis was done between the healthy ileum and the ascending colon to maintain the continuity of the bowel. A Meckel's Diverticulum was also noted in the gangrenous segment of the ileum. An appendicectomy was performed prophylactically so as to rule out appendicitis as a cause of abdominal pain, if any in the future.

Fig.3 The Resected Gangrenous specimen of the terminal ileum with a Meckel's Diverticulum and the Vitello-Intestinal band.

The patient was kept nil by mouth post surgery for 3 days and then started on a liquid diet progressing to solids. Her post-operative course was uneventful and she has made a complete recovery.

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The Vitellointestinal duct also known as the omphalomesentric duct is a long narrow tube that joins the yolk sac to the midgut lumen of the developing fetus. Generally the duct fully obliterates by the 9th week of gestation. Failure of the normal embryological process results in a patent duct leading to a fistula. Sometimes a pathological diverticulum of the ileum known as a Meckel's diverticulum forms as the proximal part of the duct fails to regress and involute. This solitary diverticulum lies on the anti-mesenteric border of the ileum. As seen in the patient described above, failure of the vitelline duct to involute along with a Meckel's diverticulum led to a volvulus of the ileo-caecum causing gangrene of the terminal ileum. This is a medical emergency, which can lead to septicemia and even death if not surgically treated at the earliest. Clinical suspicion along with a proper imaging modality like a CT scan is a must to chart out a plan of action for the surgical management and treatment of this condition.

It is also advisable to perform such surgeries at a tertiary care centre with an experienced surgeon and intensive care management post operatively.