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Case Report

A RARE CASE OF PROLAPSED OMPHALOMESENTERIC DUCT WITH RUPTURED UMBILICAL HERNIA

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ABSTRACT

Strangulated ileal intussusceptions into the Meckel's diverticulum (which is caused by an incomplete obliteration of omphalomesentric duct) and coming out through ruptured umbilical hernia is an extremely rare presentation. A 3- months- old male child presented with low grade fever, refusal to feed and episodes of discomfort often alternating with long period of sleepiness and lethargy. On abdominal examination loops of intestine were seen at the site of ruptured umbilical hernia. The abdomen was opened under general anaesthesia by transverse incision. Proximal ileal intussusception into the Meckel's diverticulum, which was gangrenous, was noted. A resection with end to end ileo-ileal anastomosis was undertaken. The prolapsed bowel was replaced back and double breasting of umbilical defect was done with vicryl 2-0. The patient was completely asymptomatic and healthy.

KEYWORDS: Intussusception, Meckel's diverticulum, Umbilicus, Hernia, Infants.

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INTRODUCTION

One of the most common causes of Intestinal obstruction observed in infancy is intussusception. It is a condition in which one part of the intestine (generally a segment of small gut) slides into the adjacent part of small or large gut, which means there is a "telescoping" effect. The condition usually occurs in infants between six months and two years [1]. Another prevalent congenital abnormality of the gastro intestinal tract is Meckel's diverticulum (MD) which occurs in up to 4% of population, with a 1.3:1 male: female ratio [2]. It may remain completely asymptomatic or signs and symptoms may be similar to conditions such as crohn's disease, appendicitis and peptic ulcer disease [3]. Umbilical hernia (UH) occurs due to imperfect closure or inherent weakness of the umbilical ring. Defect mostly closes spontaneously by one year. It is more common in low birth weight females, black infants and a good number of premature infants present with it [3]. Usually no complications are seen in patients with UH and if present then the commonest being incarceration, strangulation and gangrene [4]. Here we present a case of spontaneous rupture of UH in which there is intussusception into the MD and coming out through ruptured UH, which is extremely rare.

CASE REPORT

A 3- months- old male child was brought to Aakash hospital with the complaints of irritability and evisceration of bowel following spontaneous rupture of umbilical hernia. The patient had low grade fever, refusal to feed and constipation for the past two days. The infant had a UH since birth. There was no history of coughing or prolonged crying, trauma or topical application of any unprescribed medicine or herbs on the hernia site, which could have precipitated the rupture. There was history of recurrent umbilical sepsis since the age of one month. On examination, the patient was found to be drowsy alternating with the episodes of restlessness and irritability. Patient was febrile at the time of examination with temperature of 38.5°c, pulse rate of 160 beats /minute. On abdominal examination loops of intestine were seen at the site of ruptured umbilical hernia. Per rectal examination showed an empty rectum. Emergency investigations revealed a WBC count of 28,000 /cumm, a HB of 12 g/dl. The infant was stabilized by intravenous fluid and parenteral antibiotics (ceftriaxome 100mg/kg body wt/day and metrogyl 7mg/dose I /v tds). A decision to perform an emergency exploration was taken. Nasogastric tube was placed to decompress the stomach. The abdomen was opened under general anaesthesia by a transverse incision at the level of ruptured umbilicus. On exploration, both proximal as well as distal loops of bowel, entering the MD, and coming out from ruptured umbilical hernia were noted. It was an intussusception due to evisceration at the mesenteric border opposite the omphalomesentric duct, probably due to kinking of the gut, which has occurred opposite the MD, thereby taking both proximal as well as distal loops of intestine into MD (fig. 1). The gut becomes dilated due to intussusception (fig. 2). The rest of the viscera were normal. An attempt to reduce the intussusception was made. The contents were reduced but the rupture of MD was big, so resection anastomosis was done (fig. 3). A corrugated rubber drain was put near the site of anastomosis. The prolapsed bowel was replaced back and necrotic skin overlying hernial site was cut and double breasting of umbilical defect was done with vicryl 2-0. The drain was removed after 72 hours. Oral feeding was started on the 5thpost operative day on appearance of bowel sounds. The post operative course was uneventful and the patient made a remarkably good recovery. The patient was discharged on 9th post-operative day after removing the sutures. He was asked to come after one week. The patient was asymptomatic and healthy at the time of discharge.

Fig. 1: Intussusception into meckel's diverticulum.

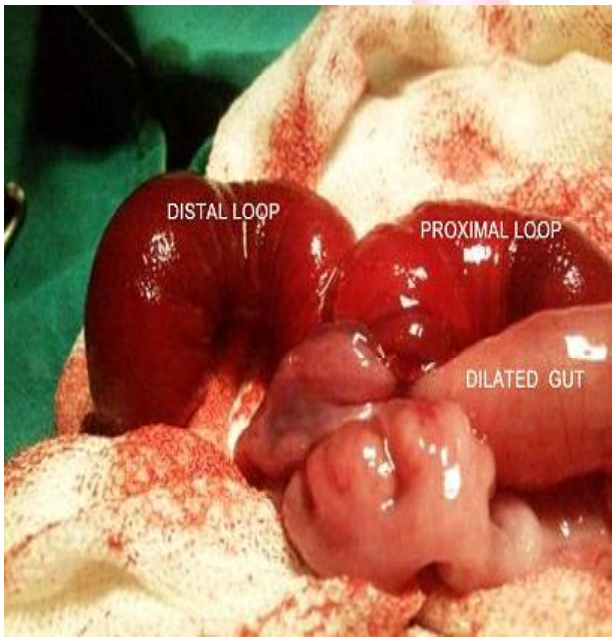


Fig. 2: Gangrenous part of ileum.

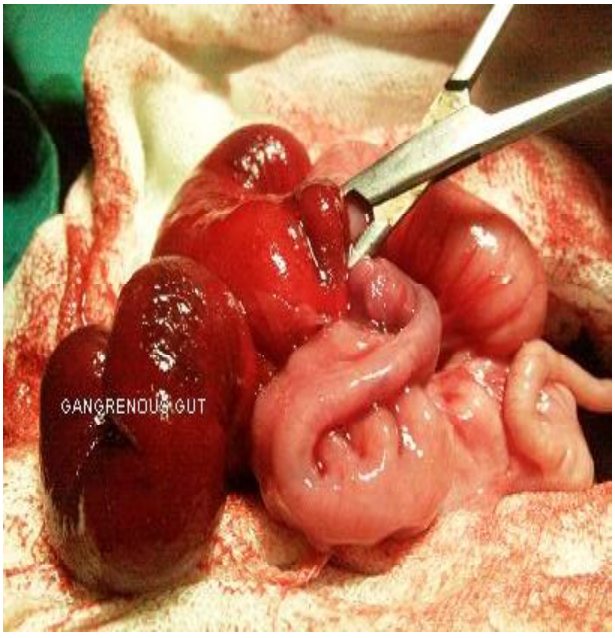
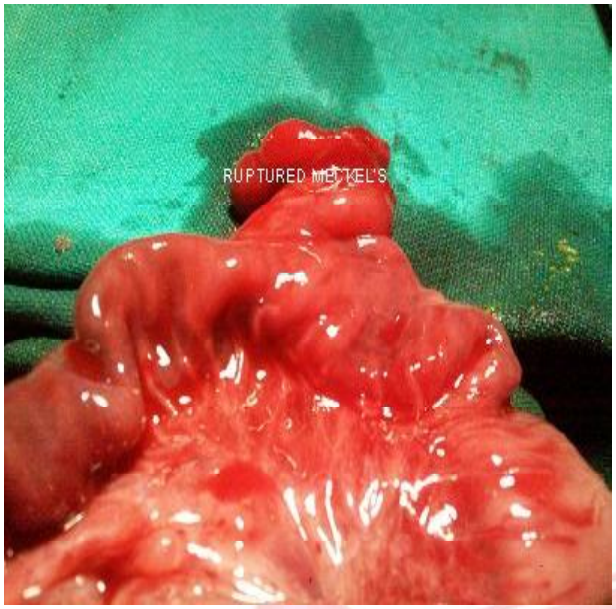


Fig. 3: After resection Anastomosis.



DISCUSSION

In infants UH develops due to congenital weakness of anterior abdominal wall or non-closure of umbilical opening after birth. Most UH that appears before six months of age disappears spontaneously by one year. In five percent of cases, UH becomes gangrenous followed by perforation of the contents and pain. Rupture of UH takes place due to trauma but spontaneous rupture of UH is extremely rare. Complications of UH are uncommon, the commonest being incarceration, followed by strangulation [4].

Evisceration is still rarer. Reports regarding evisceration of different structures such as small and large intestine, omentum and urinary bladder are well documented [4,5,6] but to the best of our knowledge, evisceration of intussuscepted intestinal loops into MD is not yet reported. MD is the most common congenital gastrointestinal anomaly, which occurs from failure of the Omphalomesenteric duct to obliterate. A MD similar to other embryonic remnants of the umbilical region can coexist with UH and can develop its own pathology, including strangulation of the hernia [7] as in present case. Most MD cases are discovered incidentally; however, they can occasionally cause serious bleeding, obstructive or inflammatory complications [2]. Complications of MD are more frequently seen in males and, therefore, are more often diagnosed in them [8].

In the present case, we found strangulated ileal intussusception into the MD and coming out through ruptured umbilical hernia. Intussusception is a common surgical emergency in infants and children. It occurs primarily in children under the age of two years [9].

CONCLUSION

To prevent the morbidity and mortality associated with complications, an early surgical management as laparoscopic or open exploration should be performed.

Although rare, MD should nevertheless be considered as a possible source of intussusception in adults as well as in children. This report emphasizes that the surgeon should be vigilant in identifying the cause of diverticulum. The occurrence of the different presentations simultaneously in the same patient makes the present case interesting and unique. Surgeons and physicians should be aware of these developmental anomalies and their presentation whiles treating such patients.

Conflicts of Interests: None

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