

Pediatric Gastrointestinal Obstruction Due to Umbilical Granuloma and Meckles Diverticulum: A Surgical Insight

Dr. Vidit Jethwa, Dr. Jignesh P. Dave, Dr. Parth Katariya

Abstract: *This case report details a pediatric patient with an umbilical granuloma and Meckles diverticulum presenting with gastrointestinal obstruction. It underscores the necessity of surgical abdominal exploration in such pediatric cases to identify and manage potential omphalomesenteric duct remnants, thus averting further complications.*

Keywords: Umbilical Granuloma, Meckle's Diverticulectomy, Acute Gastrointestinal Obstruction

1. Introduction

Ectopic gastrointestinal tissue is defined as the presence of gastrointestinal tissue at any part of the gastrointestinal tract other than at its normal anatomical location. Rarely, in infants and young children, it exists at the umbilicus and presents as an umbilical mass or sinus with discharge. Umbilical ectopic gastrointestinal tissue can at times coexist with omphalomesenteric duct remnants including Meckel's diverticulum, fistula, sinus tract, cyst, and congenital band

2. Case Report

5 year-old girl who was brought to the emergency department with acute abdominal pain associated with vomiting and fever for four days. On admission patient was in tachycardia, tachypnea and hypotensive. On Per Abdomen examination was distended and tenderness and guarding was present In RIF and periumbilical region and umbilical granuloma was found and pus discharge from granuloma was present for several days. His history revealed that the umbilical mass had been present since birth. Patient's Blood Ix within normal limit and Ultrasound finding suggestive of 7.5 mm Inflamed appendix with 2*2 cm size collection in RIF with multiple dilated bowel loops maximum 27mm diameter with sluggish peristalsis.

Owing to a suspicion of ectopic gastrointestinal mucosa at the umbilicus and GI obstruction abdominal exploration via laparotomy was performed.

On exploration 50 cm Proximal to IC junction Meckle's diverticulum with adhesive band was found which was adherent to umbilical granuloma.

Proximal to band bowel was distended and distally bowels were collapsed, Adhesiolysis with wedge resection of meckle's diverticulum with Appendicectomy with omphalectomy was performed. The patient recovered well after surgery without complications.

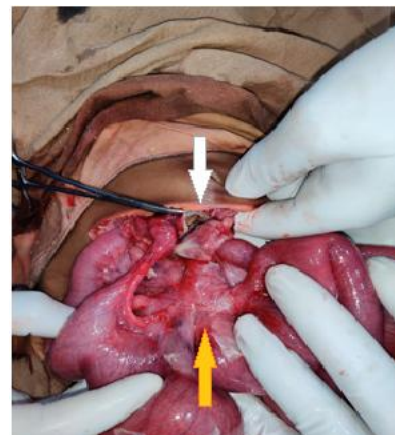
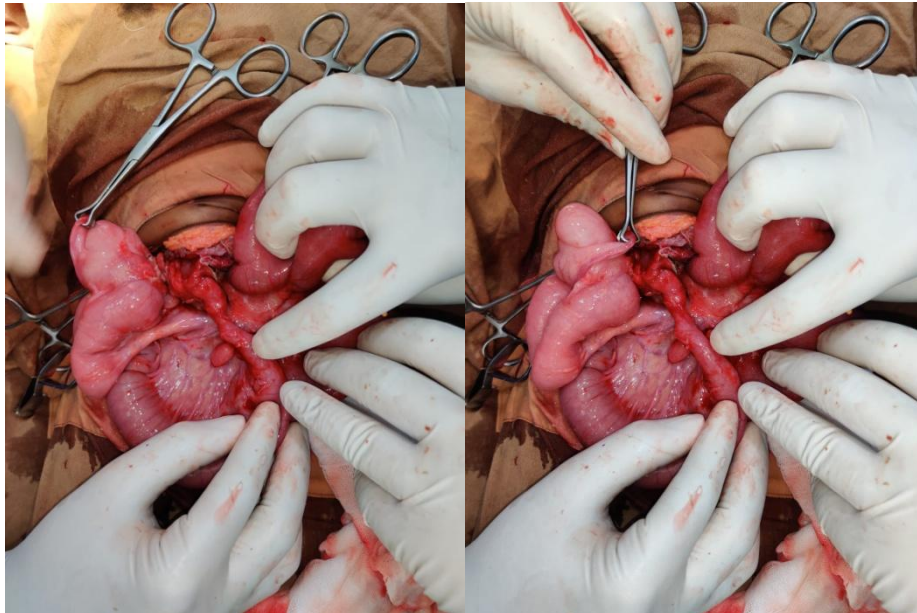


Figure:

White arrow shows Faecolith in appendicular perforation
Yellow arrow shows Meckle's Diverticulum.



Intraoperative Pictures

3. Discussion

Umbilical mass with discharge is common in infants and young children. The commonest etiology is umbilical granuloma, a moist, pink-colored mass with oozing of discharge. Umbilical granuloma is usually treated with topical 75% silver nitrate or ligation. However, if the mass fails to resolve after topical silver nitrate treatment, other possible diagnoses such as infection, remnant of the urachus, remnant of the omphalomesenteric duct or umbilical ectopic gastrointestinal tissue, should be considered. Among these conditions, umbilical ectopic gastrointestinal tissue is a relatively rare finding. It could be present as a reddish mass with persistent discharge and might also cause ulceration of the periumbilical skin. Umbilical ectopic gastrointestinal tissue can include gastric mucosa, pancreatic tissue, intestinal tissue or liver tissue. There are several hypotheses about the etiology and pathogenesis of ectopic gastrointestinal tissue, including totipotent endodermal cells differentiation, and malposition of the embryonic tissue during fetal development. Sometimes it is found to coexist with omphalomesenteric duct remnants such as sinus, cyst, fistula, fibrous band, and Meckel's diverticulum. In our case, we found coexistent Meckel's diverticula, the most common type of omphalomesenteric duct remnant. Surgical treatment is usually recommended for children with symptomatic or incidentally discovered omphalomesenteric duct remnants, due to the increased lifetime risk of complications, such as gastrointestinal bleeding, bowel obstruction, and bowel perforation

Surgical abdominal exploration should be considered in pediatric patients with suspected or diagnosed umbilical ectopic gastrointestinal tissue, to rule out the probability of coexistent omphalomesenteric duct remnants and to avoid further complications.

4. Conclusion

The article aims to highlight the importance of considering surgical exploration in pediatric patients with symptoms

indicative of gastrointestinal obstruction, especially in cases involving umbilical granuloma and Meckel's diverticulum, to effectively diagnose and treat omphalomesenteric duct remnants.

References

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