

# Incarcerated Umbilical Hernia In An Infant With Unusual Contents: A Case Report

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## ABSTRACT

*Umbilical hernia is a common anomaly found in infancy and most of these undergo spontaneous resolution by five years of age. However, few may develop complications during the period of observation. This report describes a 4-month old male infant who presented with two day history of irreducible umbilical swelling with abdominal distension and bilious vomiting. The infant was operated and incarcerated cecum and appendix with impending perforation were found. Appendectomy was performed and ileostomy was added as a safety measure. The infant recovered well.*

*Key words* Umbilical hernia, Strangulation, Incarceration, Infant, Ileostomy.

## INTRODUCTION:

Umbilical hernia (UH) is a defect of the umbilical ring and is frequently reported in infancy.<sup>1</sup> In most of the infants the umbilical defect closes spontaneously, however complications may occur during the period of observation.<sup>2</sup> There are case reports where complications related to UH are described and according to Yohida et al, till 2018 only 35 cases of incarcerated umbilical hernia were reported in the literature.<sup>3</sup> We report a 4-month old male infant with incarcerated umbilical hernia with cecum and inflamed appendix as its contents.

## CASE REPORT:

A 4-month-old, healthy male infant presented to the emergency room with two-day history of an enlarged, and painful umbilical swelling (Fig-I). This was accompanied with abdominal distension, and multiple episodes of bile-stained vomiting. The swelling was noticed soon after birth and was reducible. He also had a right inguinal swelling and was planned for elective inguinal herniotomy. Clinical examination showed a lethargic infant with the heart rate of 150/minute. A tense, irreducible, umbilical swelling was present which was 4-cm x 4-cm in size with overlying shiny and red skin. Patient was



Fig I: A large irreducible umbilical swelling.

admitted to intensive care unit with the diagnosis of strangulated umbilical hernia, for optimization, investigations and subsequent treatment.

Patient was kept nil by mouth, nasogastric tube was placed, intravenous fluid hydration started and blood grouping and cross match done with the arrangement of blood products. His Complete blood count showed a hemoglobin of 9.0 gm/dl and total leukocyte count of 16,200 mm<sup>3</sup>. A supine radiograph abdomen revealed dilated bowel loops. Ultrasonography showed an umbilical defect along with the herniation of non-peristaltic bowel loops. After stabilization the infant underwent surgical exploration under general anesthesia.

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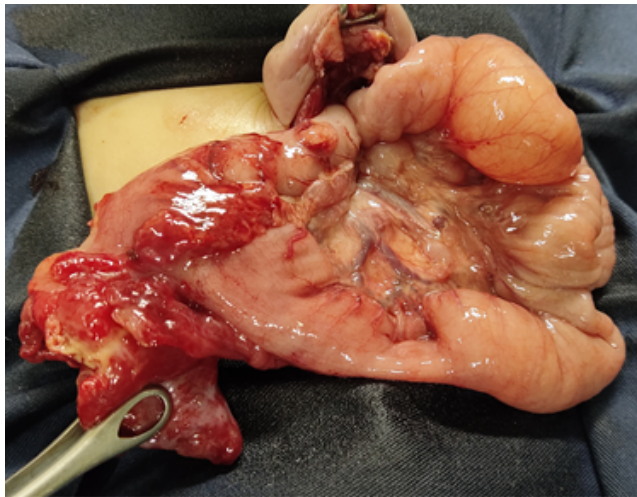


Fig II: Congested cecum with inflamed appendix.

Surgery was done through curved infra-umbilical incision. A thick walled hernial sac was found which had a narrow neck of 1.5cm. It was densely adherent with the surrounding structures. It was carefully separated dissected out and then opened. A small quantity of pus found with incarcerated and ischemic cecum and broad based inflamed appendix with impending perforation at the base (Fig-II). The color of gut improved after widening the fascial ring. Bowel loops were further traced and found dilated. The cecum was mobile. Appendectomy with diversion ileostomy was made 10 cm proximal to the ileocecal junction. Sac was then excised and repair done. Decision of stoma formation was based upon congested color of cecum, though it improved with the release of obstruction. Postoperative course was uneventful and patient discharged on 3rd day in satisfactory condition with advise about stoma care.

#### DISCUSSION:

Umbilical hernia is a common condition in children with 18–20% incidence in term and about 84% in premature babies, as estimated in a study from Denmark.<sup>4</sup> Spontaneous resolution occurs in most of the cases. However, complications in the form of incarceration, may develop in a small fraction of patients (0.07% - 0.3%) and strangulation occurs very rarely.<sup>4</sup> Some authors have described a relationship between the size of the fascial defect, and the incidence of incarceration in patients with umbilical hernia.<sup>5</sup> Lassaletta et al classified the diameter of the UH ring as small (<0.5cm), medium ( 0.5 - 1.5 cm) and large (> 1.5 cm).<sup>6</sup> The omentum, and sometimes bowel loops are the usual contents of umbilical hernia. Rarely normal or inflamed vermiform appendix may be present.<sup>7</sup>

Appendix was the content of umbilical hernia and

was inflamed with impending perforation in index case. Cecum was mobile but malrotation was not found. Our patient also had inguinal hernia and was scheduled for surgery, however it appears that parents failed to seek appropriate treatment for an umbilical swelling which was irreducible and painful as well. A proper preoperative counseling about the possibility of complications related to umbilical hernia though rare, must be done. The infant remained well after the treatment but stoma has added to the morbidity.

#### CONCLUSION

Complications in patients with umbilical hernia though rare but do occur. Presence of cecum and appendix with impending perforation are rare findings. Parents must be counseled about such a possibility and prompt treatment should be sought.

#### REFERENCES:

1. Keshtgar AS, Griffiths M. Incarceration of umbilical hernia in children: is the trend increasing? *Eur J Pediatr Surg.* 2003;13:40-3. doi: 10.1055/s-2003-38299.
2. Chirdan LB, Uba AF, Kidmas AT. Incarcerated umbilical hernia in children. *Eur J Pediatr Surg.* 2006;16:45-8. doi: 10.1055/s-2006-923792.
3. Yohida S, Yanai T, Tei E, Sueyoshi R, Koga H, Yamataka A. Incarceration of umbilical hernia in infants. *J Pediatr Surg Case Rep.* 2018;34:27-9.
4. Burcharth, J, Petersen MS, Pommergaard HC, Bisgaard T, Pedersen CB, Rosenberg L. The prevalence of umbilical and epigastric hernia repair: A nationwide epidemiologic study. *Hernia.* 2015;19:815-9.
5. Okada T, Yoshida H, Iwai J, Matsunaga T, Ohtsuka Y, Kouchi K, et al. Strangulated umbilical hernia in a child: report of a case. *Surg Today.* 2001;31:546-9.
6. Lassaletta L, Fonkalsurd EW, Tovar JA, Dudgeon D, Asch MJ. The management of umbilical hernias in infancy and childhood. *J Pediatr Surg.* 1975;10:405-9.
7. Bulgakov PP. Acute appendicitis in strangulated umbilical hernia in a child. *Pediatrics.* 1965;44:91.

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