

## Umbilical Cord Hernia: Report of an Unusual Case

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### Abstract

Congenital umbilical cord hernia is fairly common in infants and it is rarely associated with other anomalies. Sometimes, large umbilical cord hernia is confused with Small omphaloceles. We report an unusual case of umbilical cord hernia associated with patent vitello-intestinal duct (PVID), and Meckel's diverticulum underwent surgery and discharged with good general condition.

**Key Words:** Hernia of umbilical cord, Meckel's diverticulum, Patent vitello-intestinal duct.

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## 1- INTRODUCTION

Umbilical cord is a location for local artery neuropathies, urachus, midgut herniation, abdominal wall defects, and congenital cysts. Its associated anomalies are a rare manifestation in the neonatal age (1, 2). It usually has good prognosis after surgical repair. We describe an unusual case in a male newborn infant.

## 2- CASE REPORT

The case of study was a premature male infant with 34-week gestational ages, birth weight of 2,400 grams from non-attributed parent who was born in Hamadan Fatemeh Hospital (level 3 of care) with the normal vaginal delivery, and after stabilization in the delivery room, the infant was transferred to neonatal ward and examined accurately. In terms of biography, only mother reported the history of taking the propylthiouracil in pregnancy because of the hyperthyroidism. Vital signs and other examinations were normal and had no apparent anomaly. Only  $4.5 \times 3$  cm mass was seen in umbilical cord, and the placement of

umbilical cord was in the correct location. A loop of intestine at the base of the umbilical cord and a small portion from the intestinal mucosa protruding from one side of the umbilical cord were visible. The proximal portion of the umbilical cord and cord ring was covered with 1 cm of normal skin. Extruded mucosa had two openings and meconium is passed from one opening (**Figure.1**).

The patient was transferred to Besat Hospital. Initial lab test results, echocardiography, radiography and ultrasonography of abdomen were normal and after surgical consultation, he underwent surgery. During surgery, it was observed that a loop of small intestine had way into umbilical hernia ring. In addition, Meckel's diverticulum and vitelline duct patency were seen, which resection and restoration of the small intestine and umbilical cord hernia were performed (**Figure.2**). Infant had no problem after surgery, and he was discharged 6 days after surgery with good medical condition.



**Fig.1:** Umbilical cord Hernia with PVID.



**Fig.2:** Postoperative appearance of the repair.

### 3- DISCUSSION

During the third week of intrauterine life, there was a link between fetus intestine and yolk sac through a narrow tube called as Omphalomesenteric duct, which it disappears at end of the seventh week. There was a midgut physiological herniation to cord during fifth and seventh week of pregnancy. Normally, during 10 to 12 weeks of intrauterine life, fetal intestine return to abdominal cavity. At this time if a small part of the intestine cannot fully return the abdomen and stay in umbilical cord, leading to hernia of umbilical cord (3, 4).

Hernia of small intestine and sometimes other viscera to umbilical cord because of lack of full return to intestine is one of the uncommon diseases in infants, and it is less explained in scientific textbooks and sometimes it is confused with small omphalocele; while, there is real defect of abdomen wall in omphalocele, in the hernia of umbilical cord, the anterior abdominal wall is usually normal and umbilical cord base skin and umbilical ring are normal. Herniation to umbilical cord may include a small portion to entire small intestine or

associated with a portion of large intestine (5-8). Rarely other abdominal viscera herniate into the umbilical cord. In one study, even one case of liver and gallbladder herniation to the umbilical cord has been reported (9). In our infant, a loop of small intestine was herniated into the umbilical cord ring and Meckel's diverticulum and Vitelline duct patency were seen and resection and restoration of umbilical cord were performed.

Although restoration of umbilical cord hernia is usually a simple operation with good result, its complications are rarely seen. However, our infant was discharged in sixth day with a good clinical condition. In terms of taking propylthiouracil drug and association with abnormalities in the fetus, hernia of umbilical cord or omphalocele with methimazole has been reported in some studies and taking the propylthiouracil has been reported safe in the first three months of pregnancy (10, 11). In another study, there is a risk of birth defect in both of them, but it is severe with methimazole (12).

#### 4- CONCLUSION

Anomalies of umbilical cord are rare and although most umbilical cord hernia recover spontaneously, but they are associated with Patent vitello intestinal duct (PVID) and Meckel's diverticulum require surgical exploration.

**5- CONFLICT OF INTEREST:** None.

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