



PATENT VITELLO-INTESTINAL DUCT WITH UMBILICAL ABSCESS

Medicine

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ABSTRACT

A three and half year old female child presented with large swelling 10 cm in diameter in umbilical region. There was history of occasional discharge from the umbilicus since birth. On examination, there was swelling in umbilical region of size 10 cm in diameter with redness, tenderness and increased temperature with active sero-purulent discharge. Exploration was done under GA. The adhesions were separated, and the duct was dissected. The patent vitello-intestinal duct was around 10 cm in length. Postoperative recovery of the patient was uneventful and she was discharged on the 8th day. Diagnosing and management of cause of intestinal obstruction in patients without history of abdominal surgery is very challenging. We concluded surgeons should be aware of this infrequent cause of small bowel obstruction to allow for early diagnosis and to facilitate better patient outcomes

KEYWORDS

Vitello-Intestinal duct, Intestinal Obstruction

INTRODUCTION:

Patent Vitello-intestinal Duct (PVID) results from failed obliteration of the fetal omphalocele coelom (herniated loops of intestine in the umbilical cord) during the development of the midgut. In the human embryo, the vitelline duct, also known as the omphalomesenteric duct, is a long narrow tube that joins the yolk sac to the midgut lumen of the developing fetus. Generally, the duct fully obliterates (narrows and disappears) during 9th week of gestation, but a failure of the duct to close is termed a vitelline fistula. This results in discharge of meconium or stools from the umbilicus. In about 2% of humans this duct persists and gives rise to a group of anomalies of which Meckel's diverticulum is the commonest and complete patency of the duct is the rarest.^{1,2} A patent vitello-intestinal duct (VID) can present as discharging umbilical sinus, umbilical nodule or polyp, bleeding from intestinal mucosa and Intestinal small bowel prolapsed. There may be associated cellulitis, which in rare cases can rapidly progress to necrotizing fasciitis and severe sepsis. The differential diagnosis of persistent umbilical discharge includes a patent urachus (a congenital communication with the bladder), an incarcerated hernia, metastatic disease, tuberculosis or some other chronic infection.³

Case report:

We report a case of three and half year old female with umbilical abscess secondary to a patent vitello intestinal duct. A three and half year old female child presented with large swelling 10 cm in diameter in umbilical region. There was history of fever, redness, pain in umbilical region. There was history of occasional discharge from the umbilicus since birth. The symptoms aggravated over a period of three weeks, for which the patient approached us. It had gradually increased in size. She was put on intravenous antibiotics after admission and was posted for emergency exploration. On examination, there was swelling in umbilical region of size 10 cm in diameter with redness, tenderness and increased temperature with active sero-purulent discharge. Rest of the examination was within normal limits

Management:

Exploration was done under GA. To our surprise, on exploration, there was an abscess with a complete patent vitello-intestinal duct from antimesenteric border of the ileum upto the umbilicus. There were adhesions to the transverse colon and the omentum near the umbilicus. The adhesions were separated, and the duct was dissected. The patent vitello-intestinal duct was around 10 cm in length. The base of the duct was broad and 1.5 cm in diameter. Fig 1. Omphalectomy with wedge resection of the ileal end was done and sutured transversely in two layers. Postoperative recovery of the patient was uneventful and she was discharged on the 8th day. Histopathology report confirmed Patent Vitello-intestinal duct with an umbilical abscess.

Operative finding:

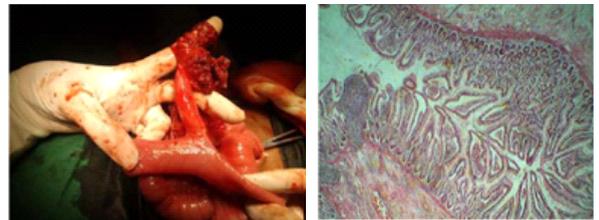


Fig 1 : Vitello-intestinal duct Fig. 2: Histopathology of the specimen

DISCUSSION:

The incidence of a completely patent vitello-intestinal duct is reported to be 0.0063–0.067%. Of all the anomalies of the VID, complete patency of the duct is the rarest. The condition is mostly seen either in neonates or in infants. The vitelline duct normally closes between the 5th and the 7th weeks of embryonic development but can lead to several pathologies in case of closure defects, giving rise to intra-abdominal (Meckel's diverticulum, vitelline cyst) or umbilical lesions (umbilical fistula, umbilical sinus and umbilical polyp). Vitello intestinal duct as an abscess is a rare presentation as shown in the study conducted by Ali et al. Patent vitello-intestinal duct can present as umbilical abscess, and it should be kept as a differential diagnosis, specifically in children presenting with umbilical discharge since birth.

CONCLUSION:

This is the first case we have seen. It needs prompt diagnosis, surgical intervention and repair of the defect. A high index of suspicion and investigations are necessary before any surgical intervention in cases of late presentation.

REFERENCES:

- Peter IW, Patricia C. Embryology and development. Gray's Anatomy Churchill Livingstone, 38th Edition: 1995. p.188-190.
- Agrawal S, Memon A. Patent vitello-intestinal duct. BMJ Case Reports. 2010;10.1136/bcr.12.2009.2594.
- LeTao, V. Bhushan, N. Vasan, First Aid for the USMLE Step 1: 20th Anniversary Edition, USA, The McGraw-Hill Companies, Inc, 2010, p.122. ISBN978-0-07-163340-6.
- Prashant NM, Ashok MB, Virsing PH, Jitendra HM: Patent vitellointestinal duct with prolapse of inverted loop of small intestine: a case report Journal of Medical Case Reports. 2007; 1:49 doi:10.1186/1752-1947-1-49
- Giocalone JP, Vanryleel F Belya. Surgical Treatment of Patent Omphalomesenteric Duct presenting as Fecal Umbilical Discharge. Acta chir Belg. 2004;10:211-213.
- P.L. Rao, S.K. Mitra, I.C. Pathak, Patent vitello-intestinal duct, Indian J. Pediatr. 1979;46: 215-218.
- A. Aggarwal, A. Memon, Patent vitellointestinal duct, BMJ Case Rep. 2010. http://dx.doi.org/10.1136/bcr.12.2009.2594.
- J. Delplace, O. Paduart, J.L. Dargent, E. Bastianelli, J. Haot, A bizarre excrescence of the umbilicus in a 1-month-old child, Rev. Med. Brux. 1996;17:3140-142.
- Ali, A.R. Jawale, J. Cama, Vitello-intestinal duct fistula—a rare presentation of a patent vitello-intestinal duct: a case report, Pac. Health Dialog. 2010;16(2):67-69.
- A. Agnihotri, H. Sarma, N. Jeebun, Umbilical sinus: case report of rare malformation with a brief insight into the other vitellointestinal ductanomalies, Internet J. Pathol. 2006;5(2):55-59.