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Case Report

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An Extremely Rare Case Report On Patent Vitello Intestinal Duct Leading to Double Proximal and Distal Ileal Intussusception

Tigabu Daniel*, Yidnekachew Mekonnen

Department of Surgery, School of Medicine, College of Medicine and Health Sciences, Hawassa University, Hawassa, Ethiopia

Corresponding Author: Tigabu Daniel, Department of Surgery, School of Medicine, College of Medicine and Health Sciences, Hawassa University, Hawassa, Ethiopia, E-mail: danieltigabu96@gmail.com

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Abstract

Background: A very uncommon condition known as double intussusception results from both proximal and distal ileal segment protrusion into the patent vitelline duct. At 5 to 9 weeks' gestation, the vitelline duct that will cause an intussusception is often obliterated.

Case report: A 22-day-old male neonate was delivered to a para II mother after 9 months of amenorrhea via spontaneous vaginal delivery at the health clinic. He had an unknown weight and screamed shortly after birth. Double intussusception via patent vitelline duct was identified; the intussusception was manually reduced; segmental ileal resection, including the duct, was performed; end-to-end ileal anastomosis was performed; and umbilical repair by purse string was completed. The patient was admitted to the ward for 7 days, and then discharged after improving. He is now in his sixth month of post-operative recovery and is not complying.

Conclusion: Although it is highly unusual for a surgeon to witness late-onset double intussusception via a patent vitelline duct, it is critical to be aware of its incidence and treatment.

Keywords: Double intussusception, Hawassa, Vitelline duct

Introduction

Patent vitelline duct is persistent intestine-yolk sack communication after 5-9weeks. The most prevalent kind of aberrant obliteration of the vitello intestinal duct is meckels diverticula, yet it is uncommon to have congenital enterocutaneous fistula through persisting vitello intestinal duct. Intussusception through the patent vitelline duct is rare, and double intussusception (proximal and distal ileal segment) is much more uncommon [1-9].

So far, only 14% of patent vitelline ducts with double intussusception have been recorded. In the other investigation, only 20 occurrences of double intussusception were documented. In nearly all instances, the surgical method was circumferential umbilical incision, reduction of the intussusception manually, segmental excision of the ileal segment containing the patent vitelline duct component, ileo-ileal anastomosis, and umbilical repair by placing purse string stitch [1,4-8]. We present a 22-day-old male neonate with patent omphalomesenteric duct with twin ileal intussusception.

Case report

A 22-day-old male neonate was delivered from a Para II mother after 9 months of amenorrhea via spontaneous vaginal delivery at home. The weight is unclear, however he screamed soon after birth. The mother underwent frequent ANC checkups. The infant was brought to the neonatal intensive care unit with a two-day-old mass protrusion through the umbilicus. Families noted drainage through the umbilicus on the fourth day of birth. There was no cough or other known risk factor that contributed to increased intraabdominal pressure. He was being treated with intravenous antibiotics at a neighboring health clinic for Omphalitis.

Upon inspection, there was a dark pinkish mass with a double limb extending from the umbilical defect. There was greenish discharge from the projecting bulk ends. A warm pack was applied. He was hospitalized with a diagnosis of term + appropriate for the gestational age + patent vitelline duct with double intussusception. Upon investigation, hemoglobin was 13.2 mg/dl and Hct was 43.4%. Resuscitated and administered intravenous antibiotics in the NICU.

Surgery was performed on the second day of hospitalization. The patent omphalomesnteric duct is circumcised by an incision in the umbilicus at the mucocutaneous junction. The tract was detached from the fascia of Linea Alba, and the peritoneum was opened. T-shaped twin intussusception is commonly seen under anesthesia. The intussuscepted ileal segment became pink after reduction and packing with warm saline. The duct remnant and surrounding 2cm of ileum were removed, and an end-to-end ileo-ileal single layer interrupted anastomosis and umbilicoplasty were performed. On the first post-operative day, the neonate began breast feeding and tolerated it. The patient improved and was discharged on the seventh postoperative

day. He is currently in his sixth month of post-operative recovery and follow-up.

Discussion

It is highly unusual to have double intussusception through a patent vitelline duct. So far, only 14 occurrences of double intussusceptions through the patent vitelline duct have been reported. Unlike the case by Ahmed Seid et al., our patient has no known risk factors such as cough or excessive sobbing, which raises intra-abdominal pressure and risk the patient developing intussusception. Similar to Tadesse et al.'s case report, our patient had a prominent umbilical mass with green discharge, spontaneous vaginal birth, normal anal status, uncomplicated prenatal care, and no vomiting. However, in our situation, the early neonatal period (4 days) of presentation. Unlike the case of Yu et al., our patient had no meckels diverticula or duplication, but simply a plain vitelline duct. Our patient appeared in his late neonatal period, as reported by Ahmed seid et al. and Mustafa. Contrary to Lone et al.'s findings, our patient had no concomitant omphalocele. In virtually all instances, the operative strategy was circumferential umbilical incision, manual reduction of the intussusception, segmental excision of the ileal segment containing the patent vitelline duct portion, ileo-ileal anastomosis, and umbilical repair using purse string [1-9]. In general, we are reporting on an exceptionally unusual occurrence of bilateral intussusception through the patent vitelian duct in late neonatal life (Figure 1-4).

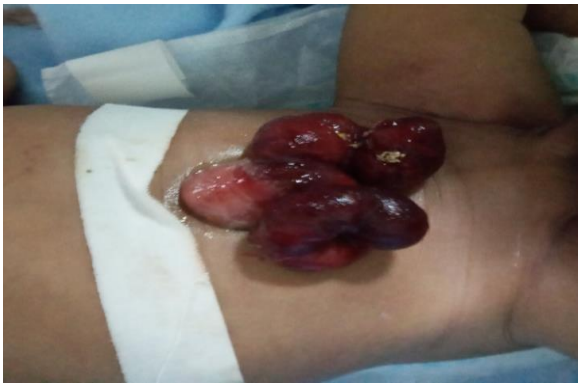

Figure 1: Dark bowel protruded through the vitelline duct at presentation.

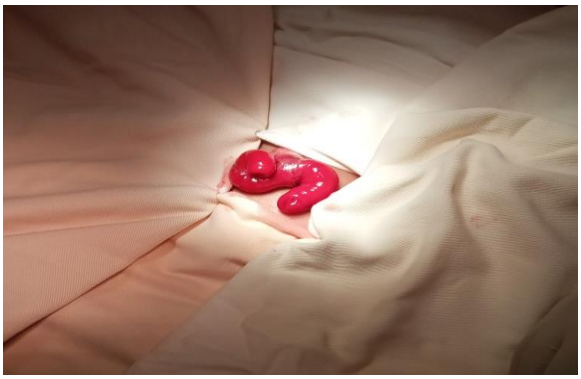

Figure 2: Typical double T-shaped double ileal intussusception after draping.

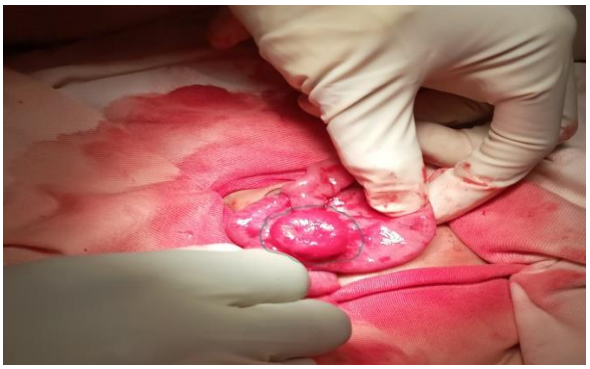

Figure 3: After reduction of the intussusception.

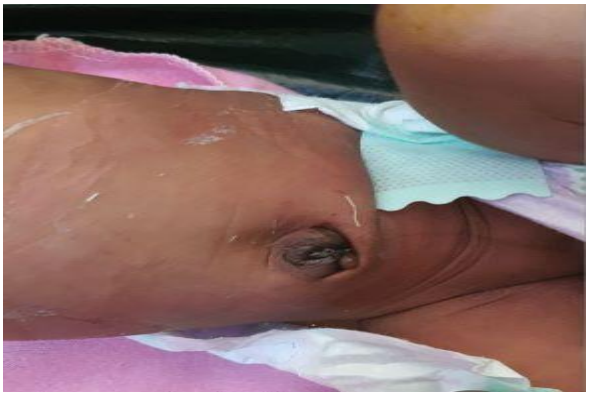

Figure 4: Umbilicus, after umbilicoplasty.

Conclusion

Although it is highly unusual for a surgeon to witness late-onset double intussusception via a patent vitelline duct, it is critical to be aware of its incidence and treatment.

Declarations

Ethical approval and consent for participation.

Written informed consent for participation was obtained from the child mother and according to the Hawassa University IRB guideline, an IRB approval letter is not needed for publication of case reports.

Competing Interests

The authors report no conflicts of interest in this work.

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There is no financial support.

Authors' Contributions

Both authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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References

1. Seid NA, Seman EA (2016) Double intussusception of ileum through patent vitellointestinal duct: Case report. J Surg 4(2): 24-26. [Crossref] [GoogleScholar]
2. Rowe GA (1988) Vitelline duct anomalies. J Pediatr Surg 23(1): 89.
3. Çelebi S, Ozaydin S, Polat E, Basdas C, Alim ER, et al. (2017) Vitelline duct pathologies in neonates. North Clin Istanbul 5(3): 211-215. [Crossref] [GoogleScholar] [Pubmed]
4. Tadesse A, Kidane P (2014) Patent vitelline duct with gangrenous small bowel prolapse: Case report and review of literature. Ethiop Med J 52(4):207-210. [GoogleScholar] [Pubmed]
5. Yu M, Fang Z, Shen J, Zhu X, Wang D, et al. (2018) Double simultaneous intussusception caused by Meckel's diverticulum and intestinal duplication in a child. J Int Med Res 46(8): 3427-3434. [Crossref] [GoogleScholar] [Pubmed]
6. Mustafa R (1976) Double intussusception of the small bowel through a patent vitello-intestinal duct. Br J Surg 63(6): 452-452. [Crossref] [GoogleScholar] [Pubmed]
7. Fazal FA, Ndungu JM, Said H, Njiru J, Kambuni F (2017) New-born born with patent vitellointestinal duct with prolapsed (intussusceptions) of proximal and distal ileal loop: A case presentation. J Pediatr Surg Case Reports 20: 14-16. [Crossref] [GoogleScholar]
8. Handayani H, Zega Y, Ziliwu T, Yaputra F, Minori N (2019) Inverted proximal ileal loop prolapse with ileal rupture through a patent omphalomesenteric duct: A rare case. Open Access Maced J Med Sci 7(5): 797-800. [Crossref] [GoogleScholar] [Pubmed]
9. Lone YA, Bawa M, Sundaram J, Rao K (2015) Omphalocele with double prolapse of ileum through patent vitellointestinal duct: A rare presentation. J Korean Assoc Pediatr Surg 21(1): 14-16. [Crossref] [GoogleScholar]