Patent vitellointestinal duct as paraumbilical abcess: A rare presentation

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INTRODUCTION: Umbilical and paraumbilical abcess can occur in children with presenting complaint of discharge from umbilical region. However, patent vitellointestinal duct presenting as paraumbilical abcess is rare phenomenon.

PRESENTATION OF CASE: One year old male child presented with complain of discharge from umbilical region since birth. Incision & drainage done twice thinking it to be paraumbilical abcess.

DISCUSSION: Vitellointestinal duct as abscess is rare presentation but it should be considered as a differential diagnosis of discharging umbilicus as management of abcess and patent duct are different.

CONCLUSION: Patent vitellointestinal duct can present as paraumbilical abscess, and it should be kept in differential diagnosis specifically in children.

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1. Introduction

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 the 5–6th week of fertilization age (9th week of gestational age), but a failure of the duct to close is termed a vitelline fistula. This results in discharge of meconium from the umbilicus [1]. In about 2% of humans this duct Persistence of duct is seen in 2% of humans and gives rise to a group of anomalies of which Meckel’s diverticulum is the commonest but complete patency of the duct is the rare [2].

We present a case of 1 year male with paraumbilical abcess due to patent vitellointestinal duct who underwent incision and drainage twice.

2. Presentation of case

A 1 year old male child presented with swelling (2 × 3 cm) palpable in para umbilical region since 20 days. It gradually increased in size. There was history of inflammation, redness, itching in para umbilical region. There was history of oozing of blood from umbilicus since birth. Patient was treated twice for the same complaint in line of para umbilical abcess (incision and drainage), the last surgery was done 1 month back before presentation to our hospital. Patient was then put on intravenous antibiotics after which he recovered fully. However, the symptoms and signs reoccurred again with continued discharge from wound site.

There was no significant family history.

On examination there was swelling in paraumbilical region of size 2 × 3 cm with redness and increased temperature with active seropurulent discharge. Rest of examination was normal.

Ultrasound of abdomen was normal.

Exploration was done under GA. A horizontal incision was made supra umbilically 3 cm long. Sheath identified and separated. Umbilical vein was identified along with vitellointestinal duct which was attached to border of ileum upto the umbilicus (Fig. 1). The ileal attachment is transfixed with vicryl 3–0 and cut end sutured with purse string sutured and embedded with ileal wall. Rest of cord with umbilical vein was cauterised.

3. Discussion

The incidence of a completely patent VID is reported to be 0.0063–0.067% [2]. 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 [3].
The vitelline duct normally closes between the 5th and the 7th weeks of intraembryonic development but can lead to several pathologies in case of closure defects, giving rise to intra-abdominal (Meckel diverticulum, vitelline cyst) or umbilical lesions (umbilical fistula, umbilical sinus and umbilical polyp) [4]. Vitellointestinal duct as abscess is rare presentation as shown in study conducted by Ali et al [5] as well as discharging umbilicus but they should be considered as a differential diagnosis of discharging umbilicus as management of abscess and patent duct are different [6].

4. Conclusion

In children presenting with discharge in umbilical region since birth, patent vitellointestinal duct should be kept in differential diagnosis.

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Author contributions

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