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Clinical Vignette

Omphalomesenteric duct cyst containing gastric mucosa presenting with periumbilical excoriation

Singh AP,[1] Barolia DK,[2] Bathia HV,[3] Parmar VH,[4] Mehta BA,[5] Mehta Shraddha[6]

1 Department of Paediatric Surgery, Bhagwan Mahavir Hospital, Mahavir Nagar, Sumerpur, District – Pali, Rajasthan, India

2 Department of Paediatric Surgery, Sir Padampat Mother And Child Health Institute, S.M.S. Medical College, Jaipur, Rajasthan, India

3 Department of Anesthesia, Bhagwan Mahavir Hospital, Mahavir Nagar, Sumerpur, District – Pali, Rajasthan, India

4 Department of Histopathology at Neuberg Supratech References Laboratories, Ahmedabad (NSRL)

5 Department of Histoanatomic Pathology, Neuberg Supratech Reference Laboratory, Ahmedabad, Gujarat, India,

6 Department of Pathology, Bhagwan Mahavir Hospital, Mahavir Nagar, Sumerpur, District – Pali, Rajasthan, India

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CASE PRESENTATION

A 2-year-old male child presented with umbilical discharge (for 1.5 years), red-brown swelling at the umbilicus (since birth), and severe excoriation around the umbilicus (for 1 year). He was taking medicine from a local practitioner for umbilical swelling for one year. But there was no improvement. Gradually periumbilical excoriation worsened.

Figure 1: Cyst and the band were excised

On examination, the excoriated skin became black. He was investigated for routine hemogram, USG whole abdomen, and pre-anesthetic checkup. Ultrasonography showed umbilical sinus. After optimization, surgery was performed that showed a cystic swelling beneath the umbilicus, opening at the umbilicus. The end of cystic swelling was connected with the distal ileum (site for Meckel's diverticulum) with a fibrous band. The cyst and the band were excised. Fig 1. Umbilicoplasty was done along with layered wound closure. The postoperative period was uneventful. Histopathology of the excised specimen showed a cystic lesion composed of ectopic gastric mucosa surrounded by muscle layer and fibroadipose tissue. This report interpreted it as an omphalomesenteric duct cyst with the ectopic gastric mucosa.

DISCUSSION

Omphalomesenteric duct cyst is the least common variant of omphalomesenteric duct1. The omphalomesenteric duct is a connective tubular stalk between the midgut and yolk sac. During embryological development (between 5th and 9thweeks of gestation) and with fetal growth this duct became obliterated. Altered and hampered development of omphalomesenteric duct can present various remnants like persistent vitelline duct, Meckel's diverticulum, omphalodiverticular band, meso-

Correspondence*: Dr. Dinesh Kumar Barolia, Barolia Bhawan, Near Panchali Phatak, Srimadhopur, District – Sikar, Rajasthan, India, Pin code – 332715
Email: id-dbaroliarnt@gmail.com

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diverticular band, omphalomesenteric duct cyst (Meckel's cyst or umbilical cyst), umbilical sinus, and umbilical polyp.1,2,3 Histopathology of omphalomesenteric duct remnant resembles the small bowel. Occasionally ectopic gastric mucosa or pancreatic tissue are also found in omphalomesenteric duct remnants. 4,5.

The presentation is variable from simple umbilical swelling to umbilical discharge, and intestinal obstruction. The umbilical discharge may be purulent (omphalitis), blood mixed (umbilical granuloma), urine (patent urachus or urachal cyst), and feculent (remnant of the omphalomesenteric duct) 7. In a retrospective study of 132 pediatric patients containing omphalomesenteric duct remnants, we found only one case (0.75%) of omphalomesenteric duct cyst. Cyst was containing small bowel mucosa and not connected to bowel and umbilicus1. But in the index case, the cyst was lined by the ectopic gastric mucosa, and the cyst opened at the umbilicus. Unusually cysts communicate with the umbilicus. All reported cases tabulated in Table 1 showed communication with umbilicus except one reported by Iwasaki M et al. 6

Table 1: Showing reported cases of omphalomesenteric duct cyst containing gastric mucosa

S.no.	Reference year	Age of patient	Clinical and Peroperative findings	Histopathology of specimen
1	Iwasaki M. et al, 2009 [6]	6 years		Heterotopic gastric mucosa
2	Tamilselvan K. et al. 2012 [7]	6 months	Persistent umbilical discharge with intermittent blood-stained fluid, periumbilical chemical dermatitis, cystic swelling beneath the umbilicus open at umbilicus	Ectopic gastric mucosa
3	Jagtap A.B. et al. 2016 [8]	2.5 years	Clear serous discharge from the umbilicus, erythema at infraumbilical region	Gastric antral type mucosa
4	Reporting case	2 years	Umbilical discharge, red-brown swelling at the umbilicus, severe excoriation around the umbilicus	Ectopic gastric mucosa

The ectopic gastric mucosa secretes gastric juice containing gastric acid. The gastric acid persistently discharged from the umbilicus and spread around the umbilicus causes chemical dermatitis and gradually excoriation occurs5. Persistent umbilical discharge with periumbilical excoriation after conservative management needed further evaluation and surgical exploration for definitive treatment.

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