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Case Report

Persistent umbilical polyp in a 5-year-old boy – A rare case report with literature review

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ABSTRACT

Umbilical granulomas are rare lesions that result due to incomplete closure of the omphalomesenteric duct at the umbilicus. We are presenting a case of umbilical polyp which has persisted in a 5-year-old male child.

1. Introduction

The embryonic structure providing communication from the yolk sac to the midgut during fetal development is called the omphalomesenteric duct (OMD), also called the vitelline or vitellointestinal duct (VID).[1] This structure is spontaneously obliterated in normal course of embryonic development. Failure of its regression results in a spectrum of anomalies including Meckel's diverticulum, patent OMD (POMD), Meckel's band, omphalomesenteric cysts, umbilical sinus, or umbilical polyp.[2,3]

These umbilical polyps are frequently mistaken clinically for umbilical granuloma due to their rarity.[4,5] It is important to differentiate between the two as the treatment for the two conditions is different – Silver Nitrate application for umbilical granuloma versus excision for umbilical polyp.

Here, we are presenting a rare case of umbilical polyp and discussing the role of histopathology in correctly diagnosing the pathology for initiating appropriate treatment in the patient.

2. Case Report

A 5 year old boy, presented to the Out Patient Clinic of Department of Surgery with his mother complaining of ulceration and on & off bloody discharge from the umbilicus since childhood. Prenatal, natal and post natal history was unremarkable. He was fully immunized.

On examination, a 5 mm nodule with an ulcer and bloody discharge was seen over the umbilicus. There was no discharge of urine or fecal material. Ultrasonography did not reveal any associated abnormality.

A provisional clinical diagnosis of umbilical granuloma was given, and repeated application of silver nitrate was tried with no significant improvement. At this point, the lesion was excised and sent for histopathological examination.

The specimen was received in 10% formalin in the Department of Pathology. Gross examination showed a 5 mm x 4 mm x 3 mm, reddish soft to firm polypoidal tissue. Cut section was homogenous grayish red in color.

Microscopic examination showed a benign lesion composed of intestinal mucosa containing numerous glands lined by cuboidal epithelium having mucin secreting cells along with few capillary blood vessels admixed with chronic inflammatory cells [Figure 1] in direct continuity with the adjacent epidermis [Figure 2]. Overall features were

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those of an omphalomesentric duct remnant consistent with umbilical polyp.

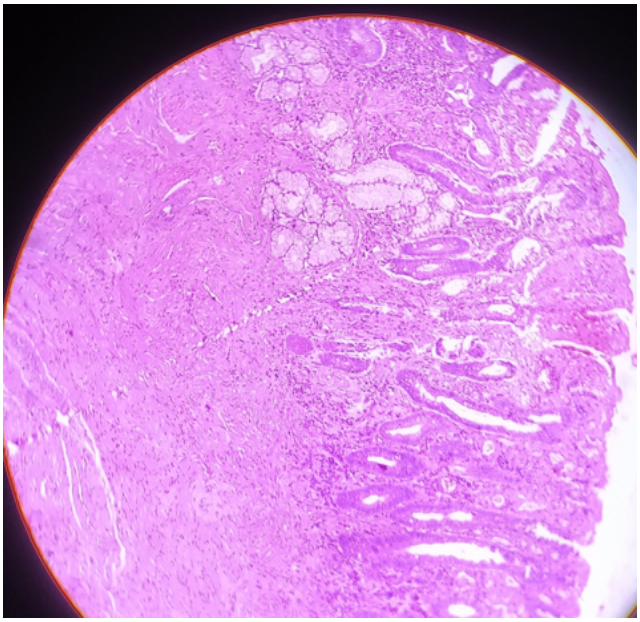

Fig. 1: Section showsintestinal mucosa containing numerous glands lined by cuboidal epithelium having mucin secreting cells along with few capillary blood vessels admixed with chronic inflammatory cells (400X).

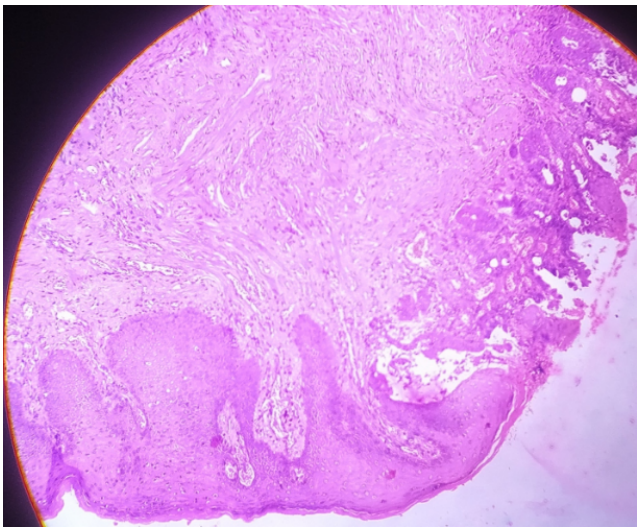

Fig. 2: Section shows intestinal mucosa in direct continuity with the adjacent epidermis (400X)

3. Discussion

Of the multiple anomalies that result due to non-obliteration of OMD, umbilical polyp is relatively a very rare entity. Gaopande et al reported only one case of umbilical polyp among 15 cases of umbilical lesions in their study.[6] Pacilli et al identified 13 cases of umbilical polyp out of 53 umbilical lesions during their study period of 10 years.[7]

Rarity of this condition often leads to a mistaken diagnosis of other conditions associated with OMD, most common of which is umbilical granuloma.[4] Others possible diagnoses are persistent urachus and omphalocele, umbilical hernias, urachal remnants, benign soft tissue masses such as epidermoid cysts, hemangiomas, and other benign soft tissue tumors.[2,3] Rarely it may contain heterotopic pancreatic tissue.[8]

Umbilical polyp is the result of incomplete distal closure of the OMD at the umbilicus.[9,10] Its clinical presentation is usually characterized by the presence of a firm, reddish and discharging polypoidal lesion.[7] Cauterisation with silver nitrate for an umbilical mucosal polyp is generally not effective. Surgical excision is the treatment of choice, but exploration of peritoneal cavity does not seem necessary in umbilical polyp.[7]

Therefore, it is important to have a proper diagnosis of umbilical polyp so as to initiate appropriate therapy for it. Ultrasonography is usually the initial diagnostic intervention in which umbilical polyps present as deep-seated, hypovascular nodules with cyst formation surrounded by thick echogenic walls. Umbilical granulomas on the other hand present as superficially located hypervascular hypoechoic solid nodules in young infants.[11]

On histopathology, umbilical polyps are usually associated with intestinal mucosa and ectopic pancreatic tissue[8,11] whereas umbilical granulomas present with prominent granulation tissue with features of neovascularization.[11]

4. Conclusion

Umbilical polyp, although a rare manifestation of the OMD anomalies, should be suspected in cases with discharging ulcer over umbilical region, especially in older infants and toddlers. Histopathology has most important role for correct diagnosis as well as to differentiate it from other disorders of the OMD. Correct diagnosis of the condition will help in initiating appropriate therapy and preventing any unwanted complications.

5. Conflict of Interest

The authors declare no relevant conflicts of interest.

6. Source of Funding

None.

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