

BEYOND SILVER NITRATE: COMPLETE CLINICAL RESPONSE WITH TOPICAL TIMOLOL AS MONOTHERAPY FOR UMBILICAL GRANULOMA

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Case report. A 6-month-old male infant with an unremarkable medical history was evaluated for an umbilical lesion that developed following omphalorrhexis. On physical examination, the patient exhibited no signs of inflammation, fever, or systemic symptoms. A horizontal, red, moist nodule measuring 1 cm in length and 4 mm in height was observed at the inferior aspect of the umbilicus (Fig. 1). Ultrasonography ruled out communication with the abdominal cavity, thereby excluding persistent embryonic remnants. The patient was referred to the Dermatology Department, where the diagnosis of umbilical granuloma was confirmed, thanks to the clinical and ultrasonographic findings. Treatment was initiated with 1% topical timolol once daily for four weeks. At the follow-up evaluation, complete regression of the nodule was observed (Fig. 2), with no reported adverse effects.



Fig. 1



Fig. 2

Fig. 1, 2: Umbilical granuloma in a 6-month-old baby before (Fig. 1) and after (Fig. 2) topical treatment with 1% timolol.

Discussion. Umbilical granuloma is the most common umbilical anomaly in infancy (1). It typically presents as a moist, friable granulation tissue following the detachment of the umbilical cord, resulting from persistent inflammation that delays epithelialization (2, 3). Conventional treatment involves silver nitrate; alternative options include table salt, antiseptics, topical corticosteroids, and doxycycline (2, 4). Timolol, a beta-blocker widely used in the management of pediatric hemangiomas and pyogenic granulomas, exerts antiangiogenic and vasoconstrictive effects, making it a potential therapeutic alternative for umbilical granuloma (5, 6).

To the best of our knowledge, based on our literature review, this case represents the first report of complete clinical resolution of an umbilical granuloma treated with 1% topical timolol monotherapy. Although the observed response is consistent with the angiogenic mechanisms underlying granulation tissue (2), these findings must be interpreted with caution. While umbilical granulomas typically require intervention, isolated cases of spontaneous resolution or regression following minimal local measures have been documented (7); consequently, a definitive causal relationship between the clinical course and the application of timolol cannot be exclusively established.

Conclusion. Topical timolol may be considered as a viable treatment option when silver nitrate is unavailable, when there is a risk of chemical burns, or when home-based therapy is preferred. However, further prospective studies are warranted to establish its efficacy, safety profile, recurrence risk, and optimal treatment regimen.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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