Pyogenic Granuloma of the Upper Eyelid during Pregnancy

Granuloma Piogénico da Pálpebra Superior na Gravidez

Keywords: Eye Hemorrhage; Granuloma, Pyogenic; Pregnancy; Pregnancy Complications
Palavras-chave: Complicações na Gravidez; Gravidez; Granuloma Piogénico; Hemorragia Ocular

Pyogenic granuloma (PG), or lobular capillary hemangioma, is a benign fibrovascular lesion affecting up to 5% of pregnancies, typically arising from the second trimester onward.[1] It commonly presents as a solitary, red to purple, sessile or pedunculated mass that grows rapidly. The lesion often has a friable surface, prone to ulceration and bleeding, yet typically remains painless.[2] Even though the gingiva and buccal mucosa are the most common locations, other sites in the head, neck, trunk, and extremities may also be affected.[2] Eyelid involvement is rare.[3]

We present the case of a 26-year-old nulliparous woman (G5A4) with mild left hemiplegic cerebral palsy. Gestation was uneventful until 23 weeks, when she reported a painless, reddish lesion on her right upper eyelid that progressively enlarged, becoming friable. The lesion was non-tender and showed no signs of infection or systemic involvement.

Due to functional impairment, surgical excision was performed at 29 weeks following ophthalmological evaluation. Histopathology confirmed a pyogenic granuloma. Despite initial improvement, the lesion recurred and reached 2 cm by 38 weeks. Given the persistent functional limitation and maternal distress, labor was induced at 39 weeks (Fig. 1A) – earlier than the hospital's standard protocol of inducing labor at 41 weeks for low-risk pregnancies. Delivery was complicated by arrest of labor, leading to an urgent cesarean section and the birth of a healthy newborn weighing 3285 g, with Apgar scores of 9/10/10.

At five weeks postpartum, spontaneous regression to nearly half its size was observed (Fig. 1B). The patient was discharged from obstetrics follow-up and remained under ophthalmological surveillance until five months postpartum, with no further intervention required.

The pathogenesis of PG remains unclear.[2] It has been associated with chronic irritation, traumatic injury, hormonal imbalances, and certain medications. Although angiogenic factors and signal transduction pathways have been studied, no single mechanism for lesion development has been conclusively identified. During pregnancy, elevated estrogen and progesterone levels are thought to amplify the inflammatory response, thereby contributing to lesion growth.[1,2]

Diagnosis is primarily clinical and histopathology may be useful to exclude similar conditions.[2] Spontaneous postpartum regression is common, and conservative management may be appropriate in selected cases.[1] However, significant symptoms or functional impairment often warrant treatment during pregnancy. Although surgical excision – widely regarded as the standard treatment due to low recurrence – was ultimately chosen in this case, other options could have been considered.[1,4] Laser therapy (CO_2 and pulsed dye) and cryotherapy have been associated with similarly low recurrence rates and may offer less invasive alternatives with potentially superior cosmetic outcomes.[4] Topical agents like timolol may not lead to complete resolution but can promote partial regression and help control symptoms during pregnancy.[5] Lesions treated during pregnancy have a higher recurrence risk, likely due to persistent hormonal stimulation, with rates up to 16%.[1]

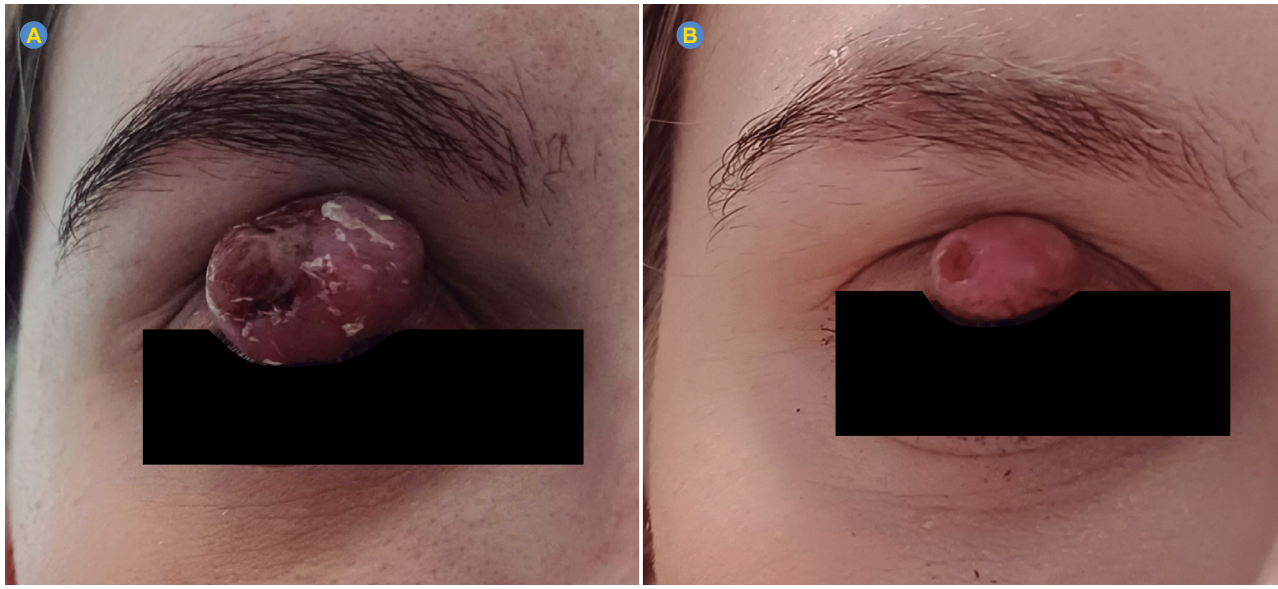

Figure 1 – Pyogenic granuloma of the upper eyelid at 39 weeks of gestation (A). Pyogenic granuloma of the upper eyelid 5 weeks postpartum (B).

A multidisciplinary approach – balancing obstetric and therapeutic considerations – is essential for achieving optimal maternal care and fetal safety.

AUTHOR CONTRIBUTIONS

MF: Literature review, data analysis, writing of the manuscript.

MPV: Study design, literature review, critical review of the manuscript.

All authors approved the final version to be published.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in October 2024.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

PATIENT CONSENT

Obtained.

COMPETING INTERESTS

MF received support for attending meetings and/or travel from Italfarmaco, Organon and Pzifer.

MPV has declared that no competing interests exist.

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REFERENCES

1. Alshuhail O, Alharbi AS, Alakeel N. A persistent oral pyogenic granuloma: a case report with review of literature. Cureus. 2023;15:e49326.
2. Sarwal P, Lapumnuaypol K. Pyogenic granuloma. Treasure Island: StatPearls Publishing; 2024.
3. Akamatsu T, Hanai U, Kobayashi M, Miyasaka M. Pyogenic granuloma: a retrospective 10-year analysis of 82 cases. Tokai J Exp Clin Med. 2015;40:110-4.
4. Lee J, Sinno H, Tahiri Y, Gilardino MS. Treatment options for cutaneous pyogenic granulomas: a review. J Plast Reconstr Aesthet Surg. 2011;64:1216-20.
5. Gupta D, Singh N, Thappa DM. Is timolol an effective treatment for pyogenic granuloma? Int J Dermatol. 2016;55:592-5.

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