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Case Report

RECONSTRUCTION OF BILATERAL EYELID COLOBOMA IN A 1 MONTH OLD FEMALE INFANT: CASE REPORT

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Abstract

Congenital eyelid coloboma (CEC) is a very rare condition. We present the case of bilateral CEC in an infant and its follow-up, highlighting the complexity in therapeutic management due to bilateral involvement and emphasizing the importance of perioperative care. This case perfectly illustrates the consequences of poor adherence to treatment. It is unique in Latin america because there are no available reports of coloboma cases involving both eyelids, which could provide valuable insights for the treatment of this condition.

INTRODUCTION

Congenital eyelid coloboma (CEC) is a rare clinical condition, with an incidence of approximately 1 in 10,000 births [1,2]. This entity results from a failure in the fusion of mesodermal structures, leading to partial or total absence of the normal tissue layers of the eyelid [3,4]. It can present unilaterally or bilaterally (rarely). The most common site of presentation is the middle third of the upper eyelid [5,6]. Histopathologically, it has been reported (analysis of eyelid margins): abnormal dermis with collagen fibers suggestive of scar tissue, varying degrees of atrophy of the orbicularis muscle and tarsus [7]. No specific cause has been proven to be related to CEC; however, an association has been suggested with intrauterine factors such as amniotic bands, abnormal fetoplacental circulation, or radiation[8].There is a direct relationship with ocular abnormalities such as dermoids, keratoconus, iris coloboma, or microphthalmia, and systemic conditions such as Treacher Collins syndrome, Goldenhar syndrome, and craniofacial dysostoses [9,10,11]. Diagnosis is clinical, where complementary studies play a fundamental role in ruling out alterations in other ocular structures. Regarding treatment the recommendation is to perform the repair of the defect between 6 and 12 months of age; however, it is also considered an option to postpone it until 2 or 3 years of age, using lubricants in the meantime.the type of recosntructive procedure depends on the clinical presentation and extent of the defect: if the involvement is less than 33% of the total surface area of the upper eyelid, it can be closed directly; when the defect involves 33-50%, it may be repaired using a tarsomarginal graft or myocutaneous flap (Tenzel semicircular flap, Mustarde lid switch flap, and specifically for the lower eyelid, Hughes tarsoconjunctival flap, and Cutler-Beard reconstruction for the upper eyelid), and if it is greater than 50%,the treatment of choice is tissue transplantation[2,3,12].

Case presentation

A one-month-old female patient, born at 38 weeks of gestation, second pregnancy of the mother, uneventful cesarean delivery. Referred to the ophthalmology service with the following findings: central fixation visual acuity (VA) in both eyes. Right eye (OD) and left eye (OS) Figure 1 : upper eyelid with full-thickness defect in the middle third, eucromic conjunctiva, clear cornea, formed anterior chamber, reactive light reflex pupil, clear lens.

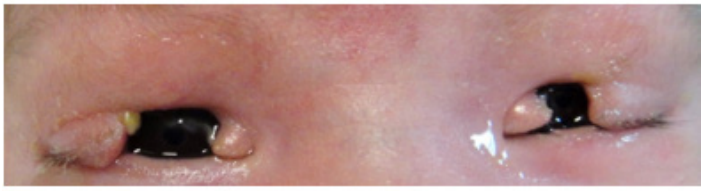

Figure 1. bilateral upper eyelid coloboma.

Fundoscopic examination showed clear vitreous, round optic disc with defined edges, normal color, central emergence of vessels, apposed retina, normal foveal reflex, free macula. Preoperative protocol was requested, and the patient underwent bipalpebral reconstruction. In the right eye, a tarsal flap od the same eyelid Figure 2.

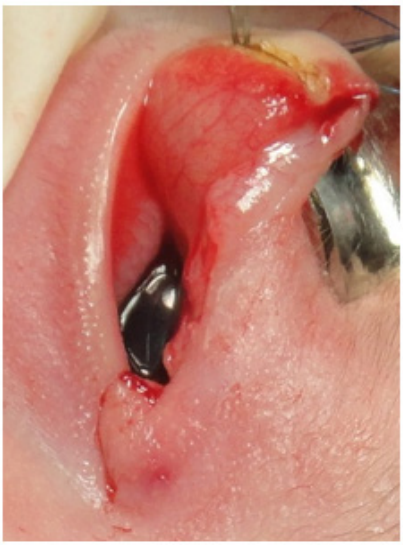

Figure 2a. Tarsal Flap.

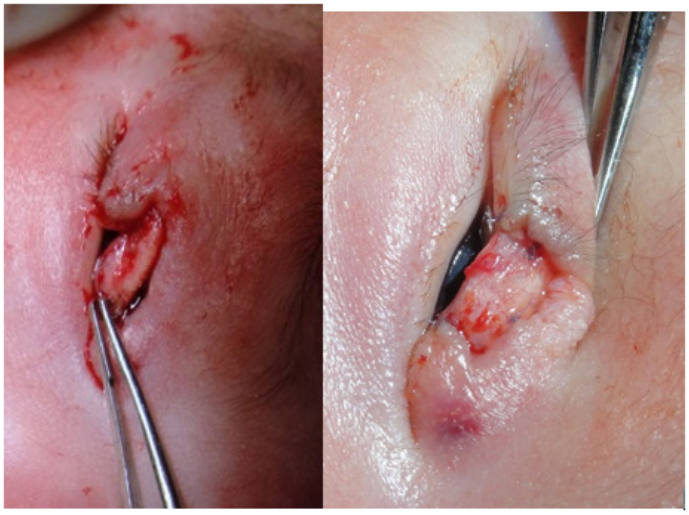

Figure 2b. Tarsal flap of the same eylelid

with retroauricular skin graft was placed Figure 2c.

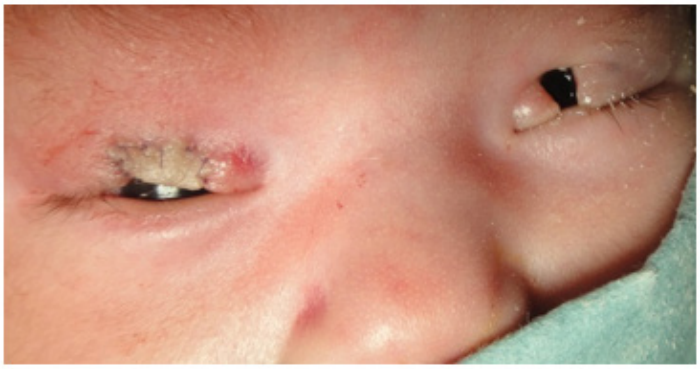

Figure 2c. Retroauricular skin graft

In the left eye, eyelid margins were refreshed and repaired by planes (inverted Tenzel flap) Figure 3a.

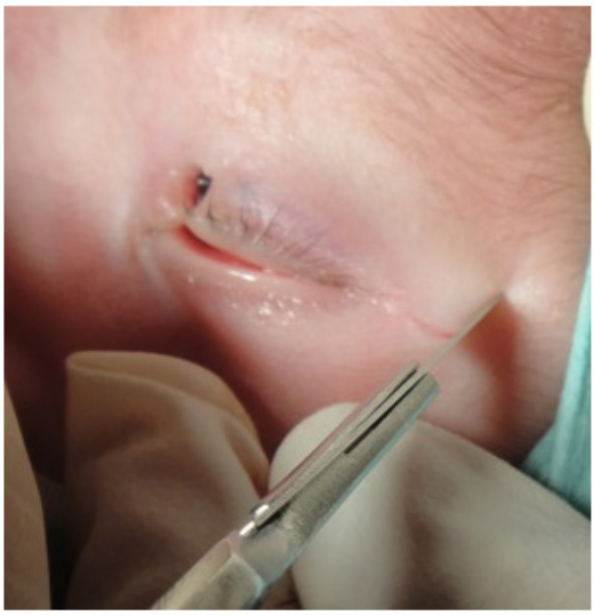

Figure 3a. Tenzel Flap.

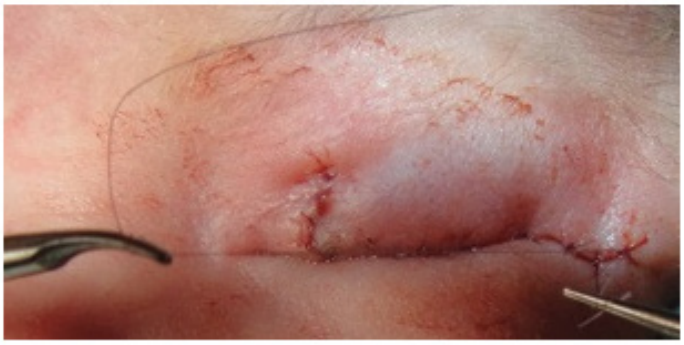

Figure 3b. Complete Closure of left upper eyelid coloboma.

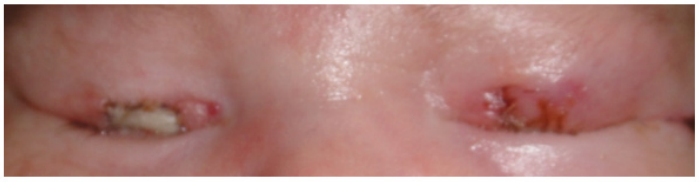

Figure 3c. Postsurgical complete eyeled coloboma closure.

Medical management included antibiotic ointment with corticosteroid (tobramycin/dexamethasone), amoxicillin/clavulanic acid, and paracetamol. Initial and intermediate postoperative course was adequate; however, in the second postoperative week, the patient presented with eyelid dehiscence in the right upper eyelid, prompting re-intervention (planes closure). Medical management continued with antibiotic ointment with corticosteroid (tobramycin/dexamethasone), amoxicillin/clavulanic acid, and paracetamol, but the patient showed slow recovery and poor adherence to medical instructions. Subsequently, the patient was re-evaluated 8 days after the second surgery, with new signs of surgical wound dehiscence in the right upper eyelid Figure 4.

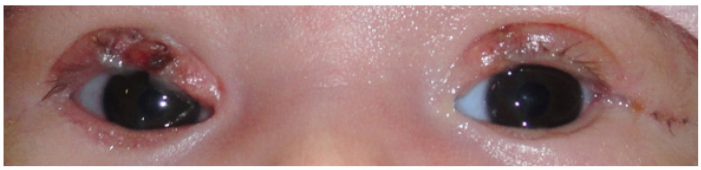

Figure 4. Dehiscence of right upper eyelid, normal evolution of left upper eyelid.

Months later, corrective surgery was again performed unsuccessfully in another medical center. This resulted in a scar notch in the right upper eyelid. Figure 5.

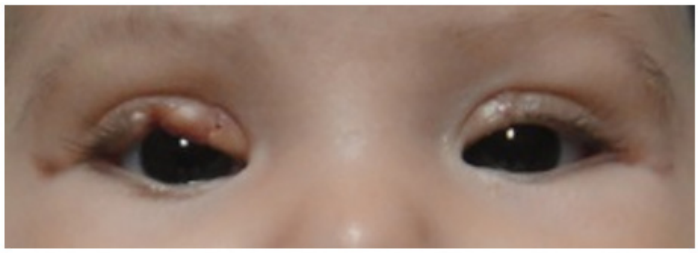

Figure 5a. Scar notch in right upper eyelid.

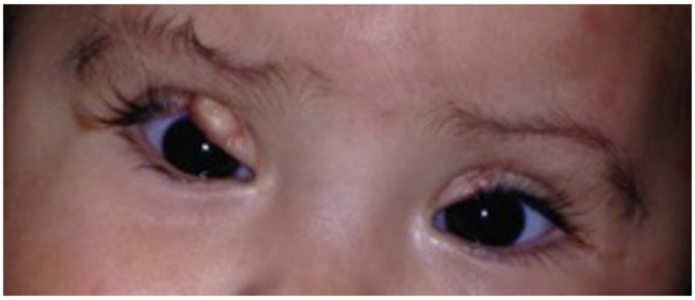

Figure 5b. Six months ecvolution.

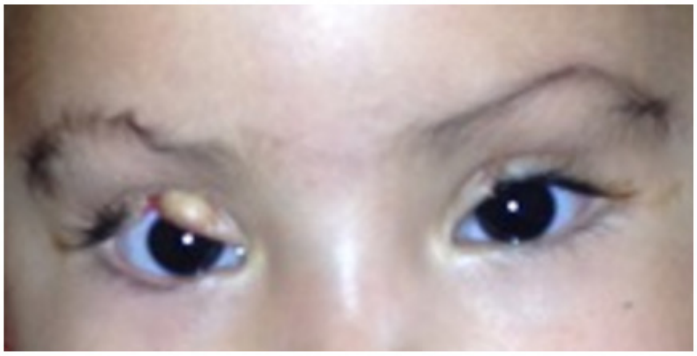

Figure 5c. One year evolution.

Discussion

Congenital eyelid coloboma is a condition that, despite its clinical diagnosis, requires a comprehensive approach to rule out other ocular conditions. CEC poses a therapeutic challenge in achieving functionality and aesthetic appearance. Therefore, the extent of eyelid involvement determines the timing and reconstructive technique, due to complications associated with corneal exposure. In this particular case of total bilateral CEC, the decision was made to perform a tarsal flap combined with a retroauricular skin flap on the right eye, and a cutaneous flap using the inverted Tenzel technique on the left eye. This therapeutic approach was tailored to the unique aspects of the case.

The evolution was described, noting that despite achieving satisfactory results in the immediate postoperative period, complications arising from poor adherence to medical instructions had a negative impact on both functional and aesthetic outcomes.

Conclusion

This case report reflects an extremely rare clinical entity (bilateral congenital eyelid coloboma), which has not been reported in Latin America. Thus, it becomes a therapeutic challenge due to the complexity of surgical correction and the consequences of delayed treatment.

Congenital eyelid coloboma, despite its low incidence, requires prompt corrective intervention due to complications primarily. The importance of close follow-up and adherence to medical instructions is highlighted in this case, as functional and aesthetic prognosis was altered due to complications resulting from poor adherence to these measures. Furthermore, this case illustrates a rare example with no similar reported cases.

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