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Bilateral Congenital Eyelid Eversion: Management of a Case Using the Conservative Approach at the CADESSO of the University Hospital Center, Donka, Conakry, Guinea

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Abstract: *Introduction:* Congenital eversion of the eyelid is a rare palpebral pathology, the first-line treatment for which is the conservative method consisting of the use of artificial tears, antibiotics and bilateral inversion of the eyelids. *Observation:* We present a clinical observation of a female neonate ten hours old, referred from a peripheral health centre for management of a bilateral upper eyelid malformation. Ophthalmological examination: revealed bilateral, symmetrical eversion of the upper eyelids in which the diagnosis of congenital bilateral eversion of the eyelids was accepted after ruling out congenital ectropion and upper eyelid haemangioma. *Conclusion:* Conservative treatment was used, which gave a good result within 10 days.

Keywords: Eversion, Congenital, Newborn, Conservative Treatment, Conakry, Guinea

1. Introduction

Congenital eversion of the eyelid is defined as the externalization of the palpebral conjunctiva. This condition may be unilateral or bilateral, and is a rare pathology, most often observed at birth, although it may also appear late in life [1, 2].

In 1896 this condition was first described as "congenital double ectropion" by Adams [3].

Little is known about the incidence of this condition worldwide.

A few cases have been reported in Africa and Europe [4].

In 2019 in Bamako, Elien GYRR et al reported a case of moderate bilateral congenital palpebral eversion associated with ophthalmia neonatorum [4].

In 2020 B Nameywa et al. also reported a case of congenital eversion of the left upper eyelid in Guinea [5].

It is higher in black babies, collodion babies and babies with Down's syndrome [5].

Several therapeutic methods have been proposed, both conservative and surgical, for the management of congenital eversion of the eyelids [6].

We share our experience of the management of a case of bilateral congenital eversion of the eyelids by conservative treatment at the Centre d'Application du Diplôme d'Etudes Supérieures d'Ophtalmologie (CADESSO) of the Centre Hospitalier Universitaire (CHU) Donka Conakry, Guinea.

2. Clinical Case

This female newborn was referred to us from a peripheral health centre 10 hours after birth with a bilateral palpebral deformity. She was the last of two siblings, the first of whom was a boy who died at the age of one month from an illness unknown to his parents.

The mother, aged 30, had a well-monitored pregnancy. Syphilis and HIV serologies were negative in the 2nd trimester. Toxoplasmosis and rubella serologies were also negative in the 3rd trimester. No information was known about the cervico-vaginal swab. This was a second full-term pregnancy with no evidence of premature or prolonged rupture of membranes, meconium-rich or purulent amniotic fluid or maternal fever during the peripartum period. The duration of labour was unknown to the mother. The delivery was eutocic, vaginal and cephalic. In addition, we found no apparent congenital malformations in the two parental families.

Ophthalmological examination of the newborn revealed eversion of both upper eyelids associated with chemosis (Figures 1 and 2). The rest of the examination was strictly normal.

Given this picture, we decided to diagnose isolated bilateral congenital eversion of both upper eyelids. After eliminating the following ocular pathologies: haemangioma of the upper eyelid, ectropion in which eversion was present in all cases, but not chemosis.

Biological tests and B-mode oculo-palpebral ultrasound were unremarkable.

Figure 1. *Congenital bilateral eversion of the upper eyelids.*

Figure 2. *Complete reduction of eversion with slight chemosis.*

Conduct

Under general anaesthesia by inhalation of fluotane by mask, we performed the operation in the operating theatre:

1) Bilateral eyewash with serum (Ringer lactate);
2) Instillation of 5% ophthalmic betadine for disinfection;
3) Local application of an antibiotic ointment (Rifamycin ®);
4) Local antibiotic prophylaxis with Rifamycin eye drops ®.
5) We reduce palpebral eversion by traction and rotation;
6) We then apply a non-compressive occlusive dressing for a few hours.

3. Results

At 10 days, the reduction in eversion of both eyelids was complete and there was no chemosis. During digital manipulation, recurrence was still possible (Figure 3).

One month later, the reduction in eversion and chemosis was complete and satisfactory, with no recurrence of palpebral eversion (Figure 3).

Figure 3. *Complete reduction of eversion and chemosis.*

4. Discussion

Congenital eversion of the eyelids is recognised as total exposure or, better still, exteriorisation of the tarsal conjunctiva, associated with inflammation and chemosis [1]. Our patient presented with a bilateral, symmetrical congenital eversion of the upper eyelid. Unilateral forms exist, one case of which was reported by M Sissoko et al in 2020 in Bamako [4]. This is a rare condition, the incidence of which is thought to be higher in the black race and during the course of certain diseases, namely trisomy 21 and ichthyosis [4].

The pathophysiology of this condition is very poorly understood, and several theories have been put forward, such as vertical lengthening of the posterior lamella of the eyelid or vertical shortening of the anterior lamella and failure of the orbital septum to fuse with the fascia of the eyelid lift, or the theory of spasm of the orbicularis muscle, which may or may not be associated with the presence of anatomical predispositions in the palpebral region that favour eversion [4, 5, 7].

Several predispositions to upper palpebral eversion have been described: hypotonia of the orbicularis muscle and laxity of the union of the anterior and posterior lamellae [8]. These

spasms of the orbicularis muscle impede venous return, resulting in chemosis which, by mechanical action, induces eversion of the eyelid. These spasms may also be induced by conjunctival irritation, obstruction of palpebral venous return, or even facial trauma caused by uterine contractions or passage through the genital tract [9, 10]. This chemosis is the key differential diagnosis distinguishing eversion from congenital palpebral ectropion. The possibility of a bilateral congenital conjunctival cyst has been ruled out by the absence of a wall limiting the subpalpebral fluid collection on ocular ultrasound [4].

In our case, congenital eversion was isolated. It is distinguished from congenital ectropion by the exposure of the tarsal conjunctiva of the upper eyelid and the presence of chemosis, whereas congenital ectropion is an outward tilt of the free margin of the upper eyelid without chemosis, most often involving the lower eyelid in association with structural anomalies of the adnexa [4, 5].

The chemosis seen in congenital eversion of the eyelid must also be distinguished from cysts of the palpebral conjunctiva.

A conjunctival cyst is defined as a fluid collection well circumscribed by a limiting wall, whereas chemosis is a diffuse, homogeneous effusion of fluid in the conjunctiva [4].

Several therapeutic approaches have been described, including conservative methods involving manual repositioning of the eyelids, and local care (regular cleansing of the face with water and hypertonic solution, use of antibiotic eye drops, artificial tears and eyelid dressings) [1, 4, 5].

Conservative treatment with puncture of the chemosis using a fine needle has been associated by other authors [4].

More invasive surgical methods should be reserved for cases of recurrence where treatment with a well-managed conservative method has failed.

These include temporary tarsorrhaphy, skin grafts, resection of the lateral margins of the upper and lower eyelids, tarsectomy with mullarectomy, excision of excess conjunctiva and subconjunctival injections of hyaluronic acid [4, 5, 8].

In this particular case, we used the conservative method without puncturing the chemosis, which gave good results after 10 days of treatment.

5. Conclusion

Congenital eversion of the eyelid remains a rare palpebral pathology, the manifestations of which are clinical and may be uni or bilateral. It is more common in newborns of the black race or in cases of trisomy 21 or ichthyosis. Prompt and appropriate treatment can lead to rapid recovery and prevent complications such as corneal perforation and amblyopia.

Collaboration between the ophthalmologist and the paediatrician is necessary for effective treatment.

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