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Case Series

Congenital Eversion of the Upper Eyelid: Conservative Treatment Approach at Sominé Dolo Hospital in Mopti

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Abstract: Congenital eversion of the eyelid is defined as an externalization of the palpebral conjunctiva, most often seen at birth but can also be revealed late. It can be unilateral or bilateral and is a rare condition that can be associated with other anomalies or malformative syndromes. We present our experience in the management of three cases according to conservative treatment. Two isolated cases, one uni and the other bilateral, and one bilateral case associated with ichthyosis. Our three patients benefited from conservative treatment with application of Rifamycin antibiotic ointment and pressure dressing every 24 hours without puncture of the chemosis with a needle until resorption of the chemosis. Conservative treatment is an effective alternative and early management is a guarantee of success.

Keywords: Eversion, Eyelid, conservative treatment.

INTRODUCTION

Congenital eversion of the eyelid is defined as an externalization of the palpebral conjunctiva, most often seen at birth but which may also reveal itself late in life [1, 2]. It was first described in 1896 by Adams as "congenital double ectropion" [2, 3]. Involvement may be unilateral or bilateral [3, 4]. It is a rare condition but may be associated with other anomalies or malformative syndromes. The natural course of the disease is marked by the onset of ophthalmia neonatorum, corneal lesions, or chronic unstable palpebral inversion [1, 5, 6]. It is most common in newborns of the black race [3, 7, 8]. A few cases have been reported in Europe [1, 3], Africa [2, 4, 8, 9] and in Mali at CHU-IOTA [4, 9]. The natural course is marked by the onset of ophthalmia neonatorum, corneal lesions or chronic unstable palpebral eversion [7]. Management is conservative in the first instance but may be surgical depending on the case. We present our experience in the management of three cases according to conservative treatment.

OBSERVATIONS

Case N°1:

A female newborn, one day old, referred from the gyneco-obstetrics department for unilateral inflammation of the upper eyelid following a dystocic vaginal delivery. Obstetrical history was unremarkable. General paediatric clinical examination was unremarkable. Clinical ophthalmological examination revealed an upturned upper eyelid with an enormous conjunctival chemosis and diffuse hyperemia. Examination of the eyeball with a portable slit lamp was normal, and the fundus with direct ophthalmoscopy was also normal. In view of this picture, we accepted the diagnosis of isolated unilateral congenital eversion. Management began with cleansing of the eyelid with saline, followed by reduction with Rifamycin antibiotic ointment and placement of an occlusive dressing for 24 hours. Follow-up was daily, with repetition of the procedure until total reduction of the ectropion and acquisition of palpebral dynamics, which occurred after five days of treatment. The patient was seen 15 days later and again at one month.

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Case 1: Unilateral congenital palpebral eversion

Case N°2:

A newborn male, 12 hours old, brought in by his parents with bilateral palpebral swelling after a home delivery. His obstetrical history showed that the mother had not had any prenatal consultations or pregnancy follow-up. Ophthalmological examination revealed bilateral eversion of the upper eyelids, mottled with conjunctival secretions, with significant conjunctival chemosis and diffuse hyperemia. Examination with a portable slit lamp and retractors allowed us to explore the eyeballs, which were intact. Given this clinical picture, we accepted the diagnosis of bilateral congenital palpebral eversion associated with conjunctivitis. Management began with careful cleansing of the conjunctiva with saline, followed by reduction with Rifamycin antibiotic ointment and a 24-hour occlusive dressing. Progress was favourable at the first check-up, i.e. 24 hours later. The procedure was repeated every 24 hours until total reduction and palpebral dynamics were achieved after six days of treatment. The patient was re-examined at 15 days and one month later for follow-up.

Case 2: Bilateral congenital palpebral eversion

Case N°3:

A male newborn, one day old, referred from the gynecology-obstetrics department for bilateral inflammation of the upper eyelid on ichthyosis following an eutocic vaginal delivery. Obstetrical history was unremarkable. General clinical examination revealed congenital ichthyosis. Clinical ophthalmological examination revealed an upturned upper eyelid without conjunctival chemosis, but with diffuse hyperemia. Examination of the eyeball with a portable slit lamp was normal, and the fundus with direct ophthalmoscopy was also normal. In view of this picture, we accepted the diagnosis of bilateral congenital eversion associated with cutaneous ichthyosis. Management began with cleansing of the eyelid with saline, followed by reduction with Rifamycin antibiotic ointment and placement of an occlusive dressing for 24 hours. Follow-up was daily, with repetition of the procedure until total reduction of the ectropion and acquisition of palpebral dynamics, which occurred after two weeks of treatment. The patient was seen weekly for one month and once a month for three months.

Case 3: Bilateral congenital palpebral eversion associated with ichthyosis

DISCUSSION

Congenital eversion of the eyelid is defined as externalization or, better still, total exposure of the tarsal conjunctiva, and is associated with inflammation and chemosis of varying intensity [1, 5]. Our three newborns all had externalization of the tarsal conjunctiva, with significant chemosis and secretions in the second and an association with ichthyosis in the third. The condition is most often bilateral, but unilateral involvement has been reported in the literature [3, 4, 9].

Our work presents the different clinical localizations of congenital eversion of the eyelid, namely the unilateral and bilateral forms. Congenital eversion of the eyelid is a rare condition, with a higher incidence in the black population and in certain anomalies such as trisomy 21 and ichthyosis [2, 3]. It may be isolated or associated with such conditions. Our work also presents a case associated with ichthyosis. Our first two patients had no embryofoetopathy or other apparent diseases on general physical examination by the paediatrician, but the third had associated ichthyosis. We are therefore dealing with two isolated forms and one associated form.

The pathophysiology of congenital eyelid inversion remains poorly understood. However, a number of hypotheses have been put forward, notably the theory of orbicularis muscle spasm associated with the presence of palpebral anatomical predispositions favoring eversion [1]. Spasms of the orbicularis muscle would lead to obstruction of venous return, resulting in chemosis which, by mechanical action, would induce eversion of the eyelid. On the other hand, these spasms may be induced by conjunctival irritation, obstruction of palpebral venous return, or even facial trauma caused by passage through the genital tract or uterine contractures. This chemosis is the key differential diagnostic element in differentiating between eversion and congenital ectropion of the eyelid. Congenital ectropion of the eyelid presents as an outward tilt of the free eyelid margin without chemosis, preferentially affecting the lower eyelid and associating structural anomalies of the adnexae [10]. The chemosis seen in congenital eversion of the eyelid should also be distinguished from conjunctival cysts, which are fluid collections of the conjunctiva well circumscribed by a militant wall.

Several predispositions to superior palpebral eversion have been described, including hypotonia of the orbicularis muscle, laxity of the union of the anterior and posterior lamellae [11], and palpebral trauma at birth, shortness of the anterior lamella or cervical elongation of the posterior lamella of the eyelid, absence of insertion of the orbital septum to the fascia of the elevator of the upper eyelid [12] laxity of the medial canthal ligament and lateral elongation of the eyelid [2]. In our second patient, we noted that he had given birth at home. In such cases, we often encountered various traumas to the newborn, which could be a predisposing factor for the disease.

The therapeutic management of congenital eversion of the eyelid can be either conservative or non-invasive surgical. Conservative treatment, indicated as first-line therapy, consists of manual reduction of the exposed conjunctiva, combined with local care (regular cleansing of the face with water or hypertonic solution) [6, 9]. The aim of this treatment is to prevent dehydration of the exposed conjunctiva, by instillation of physiological saline and application of ophthalmic antibiotic ointment; and to encourage permanent inversion of the everted eyelid, by corrective manoeuvres as soon as the chemosis is resolved [1, 6, 13]. Our three patients underwent conservative treatment with the application of Rifamycin antibiotic ointment and a pressure dressing every 24 hours, without puncturing the chemosis with a needle, until the chemosis was resorbed. The application of Rifamycin antibiotic ointment was justified by the presence of ophthalmia in the second patient, who had undergone a home delivery. Adeoti et al had reported a case of early neonatal infection at 24

hours of life associated with neonatal ophthalmia on congenital palpebral eversion [6]. Surgical treatments are more invasive, represent another alternative to the treatment of congenital eversion of the eyelid, and should be reserved for cases of recurrence despite well-managed conservative treatment. They include temporary tarsorrhaphy, resection of the free margins of the upper and lower eyelids, tarsectomy with mullarectomy, skin grafts, excision of excess conjunctiva, establishment of the union between the anterior and posterior lamellae through fornix reconstruction, and subconjunctival hyaluronidase injections [2].

CONCLUSION

Congenital eversion of the upper eyelid is a rare pathology of the newborn. It may be isolated or associated with an embryofetopathy, and the clinical location may be unilateral or bilateral. Conservative treatment is an effective alternative, and early management is a guarantee of success.

Declaration of Interest: The authors declare that they have no conflicts of interest in connection with this article.

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