Case Report

# Congenital Ectropion in Three Babies in the University of Benin Teaching Hospital, Nigeria

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## Abstract

Congenital ectropion is a rare condition affecting newborns, in which the upper eyelid is turned outwards. Its etiology and pathogenesis, while not yet clear, are associated with congenital lid disorders such as blepharophimosis syndrome, congenital ichthyosis, Down syndrome, and birth trauma, with a higher incidence among Africans. This article reports three cases of this rare condition and their subsequent nonsurgical management. It is important to diagnose this condition early to institute swift conservative care, rule out associated conditions, and ensure good vision in the patient.

**Keywords:** Congenital ectropion, eyelid eversion, tarsorrhaphy

## Introduction

Congenital ectropion (eyelid eversion) is a relatively rare clinical entity, which can be alarming to parents and caregivers of the affected neonate. Its etiology, though unknown, has been associated with a number of intrauterine and genetic factors.[1] The treatment could be conservative, by the use of medications and watchful waiting, and through surgical correction.[1] Although this condition is said to be rare, this article reports three cases of congenital ectropion in children who presented within a period of 14 months in this tertiary hospital in Benin City, Nigeria, and their subsequent conservative management.

## Case Reports

### Case report 1

Baby O, a six-hour-old female baby, was brought to the Ophthalmic Clinic by her parents with bilateral eye swelling since birth. There were associated redness, a thin mucoid discharge, and inability to view the eyeballs by the parents. She was born to a 38-year-old woman with an uneventful ante- and perinatal history. The child was delivered at term through spontaneous vertex delivery and cried well at birth. She is the third child of her parents, and none of her siblings had similar problems.

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Examination showed a calm baby, with bilateral eversion of both upper eyelids and hyperemic conjunctiva with chemosis, which prevented lid inversion and parting, thereby impeding visualization of the globe. A diagnosis of bilateral congenital ectropion was made [Figure 1a].

She was managed in the special care baby unit to ensure adequate instillation of eye drops and close monitoring of the eye. She was started on 2% hypertonic saline eye drops two hourly, 0.5% moxifloxacin eye drops two hourly, and 1% chloramphenicol eye ointment nocte into both eyes. Antibiotic-impregnated gauze dressing was used to cover the exposed tarsal conjunctiva. Spontaneous inversion occurred after 11 days, starting from the nasal edge of the eyelids bilaterally [Figure 1b], until inversion was completed at day 15.

She was subsequently discharged from inpatient care, with instructions to continue topical medications and to return for clinic visit in one week. She failed to return to the clinic as her

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family relocated to another town, but she has been well ever since as reported by her mother through telephone.

## Case report 2

Baby U., a nine-hour-old male neonate, presented to the Children's Emergency Room with his parents with a history of swelling of his left eye since birth. There were associated redness and a thin clear discharge, and the globe was not visualized. He was also born through spontaneous vertex delivery to a 25-year-old woman following an uneventful antenatal period and is the second child of his parents. His sibling did not have similar problems.

Examination showed a calm neonate with no gross systemic abnormalities. Ocular examination showed a complete eversion of the left eyelid and an inflamed, chemosed conjunctiva. There was a failure of lid inversion with difficulty in exposing the globe. The right eye was normal [Figure 2a]. A diagnosis of left congenital ectropion was made, and he was started on topical 2% hypertonic saline two hourly, 0.3% ciprofloxacin eye drops six times daily, and 1% chloramphenicol eye ointment three times daily in the left eye. The affected eye was covered with antibiotic-impregnated gauze dressing, which was changed every other day in the clinic. He was managed as an outpatient, and after one week, the eyelid spontaneously inverted [Figure 2b]. Ocular examination done was normal, and he was subsequently discharged from the clinic after another week.

## Case report 3

Baby M.U, a three-month-old boy, presented with swelling of the left eye since birth, with associated redness, itching, and recurrent mucopurulent discharge. He was born to a 19-year-old woman with a primary level of education, who had an uneventful antenatal history, and he was delivered by a traditional birth attendant at term with no obvious difficulties.

The child was initially brought to the Ophthalmic Clinic of the University of Benin Teaching Hospital at two weeks of age, where he was placed on topical medications, but failed to return to the clinic due to financial constraints. His mother denied the use of any traditional eye medications or unsanitary procedures during this period.

At presentation, the child was noted to be healthy and playful, with no gross physical abnormalities. Ocular examination showed an everted left upper eyelid, with inflamed, keratinized tarsal conjunctiva. Parting of the eyelids revealed a white bulbar conjunctiva and a clear cornea, which was not staining with fluorescein dye following examination under cobalt blue light. Other ocular structures were not well visualized due to the infant's poor cooperation [Figure 3].

A diagnosis of left congenital ectropion complicated by conjunctival keratinization was made. The child was treated on an outpatient basis and was placed on topical 2% hypertonic saline two hourly, topical 0.3% ciprofloxacin six times daily,

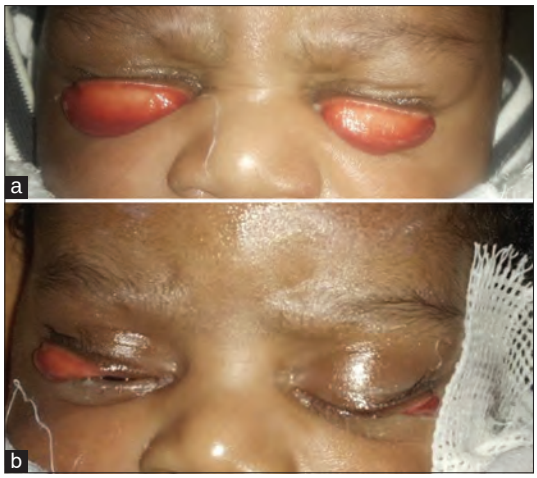


**Figure 1:** (a) Baby O. with bilateral eyelid eversion at presentation. (b) Partial inversion of eyelids after 11 days of conservative management

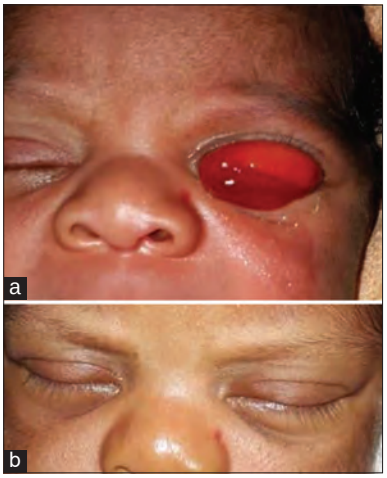


**Figure 2:** (a) Baby U, with left upper eyelid eversion at presentation, with injected conjunctiva and marked chemosis. (b) Baby U, with complete inversion of the left eyelid after one week of conservative care

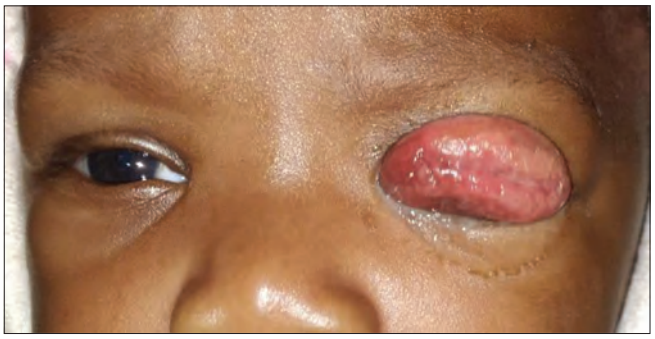

**Figure 3:** Baby M.S, at presentation, with a left upper lid eversion, diffuse conjunctival injection, chemosis, and keratinization of the exposed tarsal conjunctiva

and chloramphenicol eye ointment three times daily in the left eye, and it was covered with antibiotic-impregnated gauze dressing. He came for three dressing changes over a period of two weeks but subsequently failed to return to the clinic and was unfortunately lost to follow-up.

## Discussion

Congenital ectropion (eversion of the eyelids) is said to be a rare clinical entity; however, in this centre, there were three cases seen within 14 months. A similar article reported three cases over a period of three years, occurring in a tertiary hospital in Nigeria as well, and all these could point to a higher incidence among Africans,[1] even though a number of cases have been reported in different parts of the world. It has been associated with Down's syndrome, ichthyosis, blepharophimosis syndrome, and euryblepharon, and it can also rarely occur as an isolated finding.[2-5] None of these babies were noted to have any of these conditions following a thorough physical examination. Some authors use the term "congenital ectropion" to refer to those which require surgical repair, while the others which can be managed conservatively are termed "congenital eyelid eversion."[3]

Different possible etiologies have been postulated, including vertical shortening of the anterior lamella of the eyelid and a relative vertical lengthening of the posterior lamella, which can occur in ichthyosis syndromes.[2,3] It is also associated with assisted delivery techniques such as forceps and vacuum delivery.[3] Other possible etiologic factors include congenital eyelid hypotonia, overlapping of lower eyelid margins by the upper eyelid, the absence of an effective lateral canthal ligament, and lateral elongation of the eyelid.[3,6,7] In congenital ectropion from an inflammatory cause, conjunctival swelling can lead to its protrusion, which, if it becomes severe enough, can lead to eyelid eversion[3,8] Strangulation of the conjunctiva can then occur at the base of the eyelid and, with the concomitant spasm of the orbicularis oculi, can lead to decreased venous return and worsening congestion. This can account for the severe chemosis seen in these affected babies.[3,8]

Congenital eyelid eversion can be treated conservatively, and high success rates have been achieved using topical antibiotics and hypertonic saline.[1,6,7,9] Antibiotic therapy in the cases presented was initiated to prevent secondary bacterial infections, especially since these neonates are prone to infection and live in a tropical country where the humidity is favorable for bacterial proliferation.[9] In this centre, fluoroquinolones are the preferred antibiotic for prophylaxis, and moxifloxacin is preferred as the available brand is without preservatives. Surgical repair is left for persistent cases and those with associated eyelid abnormalities, e.g., blepharophimosis syndrome.[5] In a low-resource country like Nigeria, it is important to institute conservative therapy as soon as possible, to prevent complications such as keratinization of the conjunctiva and secondary infections, even though corneal complications are rare as the chemosed conjunctiva protects the globe.[10] This was seen in the third case which presented late on account of financial constraints.

Even though this condition is considered rare, there were three cases seen in this centre within a 14-month period. This could be due to the fact that it is a tertiary health institution, which serves as a referral centre for primary and secondary health facilities within a significant area of the south-south geopolitical zone of Nigeria. Considering this and the case reports seen in published literature,[1,4-9] it is perhaps more common than realized. It is, therefore, important that health practitioners are aware of this condition, so that swift referrals can be made as it is very amenable to conservative care.[1] This is particularly important as these patients tend to present very early in life (nine hours of life and seven hours of life, respectively), and such mothers must have been genuinely concerned about the state of the newborn's eyes, to have overcome their fatigue of delivery and present as soon as possible to the hospital. Such a sacrifice must be met with prompt and accurate diagnosis and treatment to ensure good visual prognosis.

Patients who present late (such as the third case) or in whom there is a failure of conservative management could benefit from surgery. Surgical options which have shown good outcomes include lateral tarsorrhaphy with excision of any redundant conjunctiva, horizontal tightening of the lateral canthal tendon, and vertical lengthening of the anterior lamella with the use of a full-thickness skin graft.[2,8,10] It is imperative that the decision to convert to surgical management is made in a timely manner to avoid stimulus deprivation amblyopia.

## Conclusion

Congenital ectropion is a rare disorder which has an excellent visual prognosis with early institution of conservative care. Good cosmesis is achieved following treatment, and eyelid function appears to be maintained. To be sure of the subsequent eyelid function following conservative treatment of this disorder, more data collection and follow-up of these patients are required. More reports of this condition have to be made to establish proper epidemiological statistics, and training of medical personnel involved in obstetric and neonatal care is necessary for early identification and appropriate referral.

### Declaration of patient consent

Written consent was taken from the parents of the children for their photographs and medical information to be used in this article. Only their initials were used and names were not disclosed to try and conceal the children's identities as much as possible.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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