

Congenital Tarsal Kink: Case Report

Konjenital Tarsal Kink

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ABSTRACT Horizontal tarsal kink is a rare cause of congenital upper eyelid entropion. Itching and hyperlacrimation are frequent symptoms in these cases. A horizontal kink in the tarsal plate is the underlying mechanism. The tarsus may be unilaterally or bilaterally involved. Systemic abnormalities may also be present. Surgical methods for the management of this condition involve complex lid splitting procedures or excision of tarsus and anterior lamellar repositioning procedures. In this study, a case of congenital entropion with horizontal tarsal kink managed by anterior lamellar repositioning procedure and tarsal wedge resection was presented. We believe that this surgical technique was effective and quite simple for the treatment of horizontal tarsal kink.

Key Words: Corneal ulcer; entropion

ÖZET Horizontal tarsal kink, doğumsal üst kapak entropiyonunun nadir bir sebebidir. Kaşıntı ve sulanma bu olgularda en sık karşılaşılan semptomlardır. Bu durumun altında yatan mekanizma, tarstaki horizontal kıvrılmadır. Tars tutulumu tek taraflı ya da çift taraflı olabilir. Sistemik anomaliler de duruma eşlik edebilir. Kompleks lid split prosedürleri ya da tars eksizyonu ve ön lamel repozisyonu tedavide kullanılan cerrahi metotlardır. Bu çalışmada, ön lamel repozisyonu ve tarsal wedge rezeksiyonu yapılan horizontal tarsal kinkli konjenital entropiyon olgusu sunuldu. Bu cerrahi tekniğin horizontal tarsal kinkin tedavisinde oldukça etkin ve kolay bir yaklaşım olduğunu düşünmekteyiz.

Anahtar Kelimeler: Kornea ülser; entropiyon

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Entropion is due to age-related changes, scarrical or irritative diseases, or congenital.¹ It is seen in the upper and lower eyelids unilaterally or bilaterally.¹ Congenital horizontal tarsal kink is a rare condition involving upper eyelid entropion.² Corneal complications are common.³⁻⁵ Presenting symptoms are blepharospasm and photophobia in infancy.⁶ Patients may be referred to clinics with trichiasis and keratitis. The reason is a horizontal kink in the tarsal plate, causing rotation of the marginal 2 to 3 mm of the tarsus more than 90 degrees towards the globe. It may be unilateral or bilateral with no skin crease. Systemic abnormalities may accompany the condition.⁷ Management of this condition by complex lid splitting proce-

dures or excision of the tarsus are reported in the literature. Price and Collin performed successful repair of a unilateral case with simple anterior lamellar repositioning procedure.⁶ We present a case of bilateral horizontal tarsal kink and describe our management for its repair.

CASE REPORT

A 4-month-old girl with corneal ulcer was referred to our clinic. She had been given several topical antibiotic drops soon after birth. External examination revealed bilateral upper eyelid entropion with the eyelashes directed against the cornea. No skin crease was observed, and no other ocular abnormality was found. Conjunctival and corneal cultures were negative.

The child was born at term after a normal pregnancy and delivery. Parents were unrelated, and family history showed no ocular or systemic abnormality. Systemic examination of the child was normal.

Approval from the local ethics committee was obtained, and informed consent was received from the parents of the infant. In the examination under general anesthesia, bilateral horizontal tarsal kink was observed with a right corneal ulcer of 4 x 6 mm in size in the inferotemporal quadrant of the cornea (Figure 1, 2). There was a corneal opacity on the left eye. The tarsal kinks were repaired with an anterior lamellar repositioning procedure in which a skin crease incision was made and the anterior lamella of the skin and orbicularis were dissected downwards towards the lashes (Figure 3). Bilateral tarsal wedge resections were combined with the procedure. Next, 6/0 polyglycolic acid sutures were passed through the skin just above the lashes and into the tarsal plate at a higher level, which were adjusted to provide the lid eversion (Figure 4). A small excess of the orbicularis muscle was excised. The skin was closed by interrupted 6/0 absorbable sutures, which pick up the aponeurosis (Figure 5).⁸ During the third post-operative week, both of the lids were everted, and good functional and cosmetic results were noted (Figure 6). The tarsal

kinks were resolved with residual corneal opacity on the inferior quadrant of the cornea on the right side.

DISCUSSION

Upper eyelid entropion due to tarsal kink is a rare situation, which was first described by Kettesy in 1948.⁵ Hiles and Wilder reported only two cases in a study of 14 patients with congenital upper lid entropion.⁷ Callahan previously reported a case with horizontal tarsal kink; only four more cases have been reported since.^{4,9,10}

The etiology of the kink is unknown. The overaction or malpositioning of the marginal fibers of the orbicularis muscle are thought to be the causes of tarsal infolding in utero. A defect in the attachment of the aponeurosis to form the skin crease is the suggested cause of the defective skin crease.⁶ A primary lesion in the tarsus itself may be another reason.

Associated congenital cardiovascular, skeletal, and neurological abnormalities in congenital entropion cases have been reported in the literature.^{2,7} The reported case in our study revealed no systemic abnormalities. Various surgical techniques are reported in many studies for the repair of tarsal kink syndrome. Resection of the kink and everting sutures have been performed in some studies.^{9,10} Horizontal tarsal splitting and eversion sutures are the preferred procedures in other studies, because the resection of part of the tarsus may cause lid shortening.⁴ In one study, complex lamellar tarso-plasty was performed.⁴ All of these procedures have been successful with variable manipulative approaches on tarsus.

In our case, anterior lamellar repositioning was combined with tarsal wedge resection and lid crease formation. Our procedure was successful with fully everted eyelids. We are in agreement with Price and Collins that the primary lesion may be in the orbicularis muscle or in the formation of the skin crease, since creating a skin crease can cure the condition.⁶ We also combined the procedure with tarsal wedge resection; however, no lid shortening was observed.



FIGURE 1: Everted bilateral upper lids show horizontal tarsal kink.



FIGURE 2: Upper lid entropion and corneal ulcer.

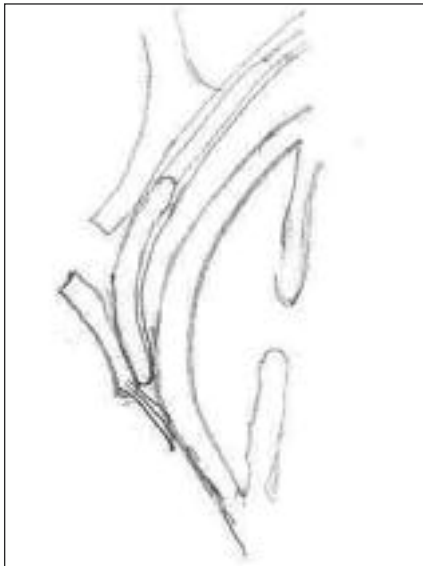


FIGURE 3: Dissection of anterior lamella of tarsal plate.

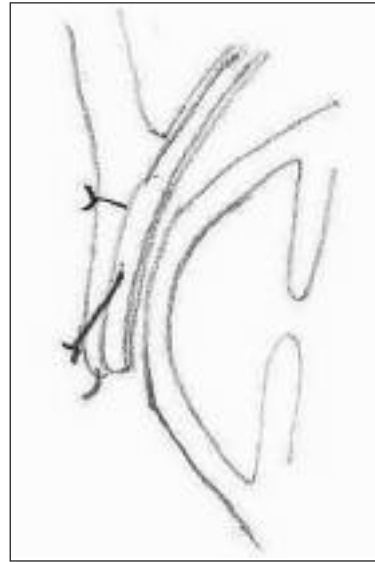


FIGURE 4: Sutures tied to evert the lashes and close the skin.



FIGURE 5: Postoperative view.



FIGURE 6: Three weeks after surgery.

In conclusion, congenital tarsal kink syndrome is an important eyelid abnormality, since its rare occurrence often results in late diagnosis that prolongs the course of corneal complications. It is important to consider congenital lid abnormalities in the differential diagnosis of neonatal corneal ulcers.

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