

Case Report

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Therapeutic Keratoplasty Simultaneous With Eyelid Reconstruction For Cicatricial Lagophthalmos

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Abstract

Herein we present a case with refractory keratitis and cicatricial lagophthalmos who underwent tectonic keratoplasty simultaneous with eyelid reconstruction for cicatricial lagophthalmos.

Introduction

Management of refractory keratitis is challenging for clinicians as during the medical treatment some complications such as corneal melting, progression to endophthalmitis and eventually loss of globe may develop. Therapeutic keratoplasties may be performed for globe saving, especially in polymicrobial keratitis (1,2). In some cases, lagophthalmos may accompany and may

increase the risk of exposure keratopathy and therefore may adversely affect the outcome of therapeutic keratoplasty and infection (3). Herein, we present simultaneous surgical management of refractory, microbial keratitis and cicatricial lagophthalmos in a 42 years-old male, homeless patient

Case Presentation

A 42 years-old male patient with loss of vision and purulent secretion in his right eye was referred to our ophthalmology department. He had been suffering for 2 weeks. On presentation, he had a severe keratitis in form of corneal ulcer with central melting in his right eye with poor light



Figure 1. Right corneal abscess and cicatricial lagophthalmos in a 42 year- old male patient

perception (Figure 1). He also had cicatricial lagophthalmos due to a sequela of right facial acidic burn. He had been exposed to acidic injury 15 years ago. He was started topical moxifloxacin and linezolid (2mg /ml) upon observing gram positive cocci and bacilli in direct microscopic examination. The corneal culture yielded methicillin resistant *S. Aureus*. Systemic linezolid (600 mg twice a day) was also initiated by the department of infectious diseases and clinical microbiology. Since corneal melting was extensive, (Figure 2) a globe saving procedure was planned. The patient underwent therapeutic penetrating keratoplasty under general anesthesia. Simultaneous with keratoplasty, a full thickness postauricular skin graft was taken from the left side.



Figure 2. Extensive corneal melting

The defect in the right eyelid leading to cicatricial lagophthalmos was repaired with the skin graft and the lagophthalmos was improved (Figure 3). The patient could close his eyelids preventing exposure keratopathy at postoperative first week (Figure 4). At first month, the graft was fully integrated and there was no recurrence of corneal infection (Figure 5).

Discussion

23.1% of microbial keratitis has been reported to eventually require management with therapeutic keratoplasty.



Figure 3. Immediate postoperative photo of the patient after therapeutic keratoplasty and reconstruction of the eyelid with postauricular skin graft

Male gender, rural setting, low socioeconomic status and agricultural occupation have been put forward as risk factors (4). Our patient was male and as a homeless he could not receive medical therapy for keratitis on time as his admission was late. The culture was also positive for methicillin resistant *S. Aureus*, which even made the medical therapy more challenging.

Therapeutic keratoplasty was required as a globe saving procedure. In order to prevent exposure keratopathy and protect the integrity of corneal graft, simultaneous repair of cicatricial lagophthalmos was performed. Postauricular skin graft may be convenient to use for the reconstruction of eyelid.

Simultaneous surgical procedure may improve the outcome of therapeutic keratoplasty.



Figure 4. The skin graft was integrated in the eyelid and the eyelid could easily close. Lagophthalmos was improved.



Figure 5. Postoperative first month after therapeutic keratoplasty simultaneous with reconstruction of eyelid with post auricular skin graft.

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