

Combining keratoplasty with corneal tattooing

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Key words: Corneal opacity, corneal scar, corneal tattooing, lamellar keratoplasty, penetrating keratoplasty

Corneal tattooing is considered a valuable therapeutic alternative for unsightly corneal scars.^[1,2] We describe cases of penetrating keratoplasty (PK) and anterior lamellar keratoplasty (ALK) combined with corneal tattooing, with excellent cosmetic results. Case 1: A 20-year-old female presented with an unsightly corneal scar in the left eye (LE) for 12 years following wooden stick trauma [Fig. 1a]. Case 2: A 68-year-old male presented with an unsightly corneal scar in the right eye (RE). He had undergone corneal tattooing in the RE 2 years prior but was unsatisfied with cosmetic outcome [Fig. 2a]. In both cases, the corneal bed was marked with a 7 mm trephine. An initial groove of 250 μ depth was made and lamellar corneal debulking was done. Using a crescent knife, a peripheral 360-degree lamellar pocket was made in the remaining host corneal rim up to limbus. This lamellar pocket was filled with organic dye powder (Mahatme) using iris spatula. In case 1, dye powder spilled over the host corneal bed was washed thoroughly using a balanced salt solution. After this, PK was completed using a 7.5 mm donor button. In case 2, dye powder was spread over the stromal bed and ALK was completed using a 7.5 mm graft. At the end of 1 year, both patients were satisfied with the cosmetic outcome [Figs. 1b and 2b].

Discussion

The lamellar pocket procedure of corneal tattooing is considered superior to conventional methods.^[3] Berger *et al.* have reported corneal tattooing with corneal lamellar transplants in the case of a nonfunctional eye.^[4] In case 1 we did PK, as the eye was not completely non-functional. An important consideration in case 1 was to avoid pigment entering inside the eye. There were no problems regarding epithelial and wound healing and intraocular inflammation.

Access this article online	
Quick Response Code:	Website: www.ijo.in
	DOI: 10.4103/ijo.IJO_1234_19

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Received: 14-Jul-2019

Revision: 23-Dec-2019

Accepted: 18-Mar-2020

Published: 23-Sep-2020

Using peripheral rim tattooing, our cases combine the benefit of reasonable visual outcomes in select patients and excellent cosmesis.



Figure 1: (a) Photograph showing total corneal opacity and exotropia in the left eye. (b) Postoperative photograph showing clear and transparent graft with tattooing of the surrounding corneal rim

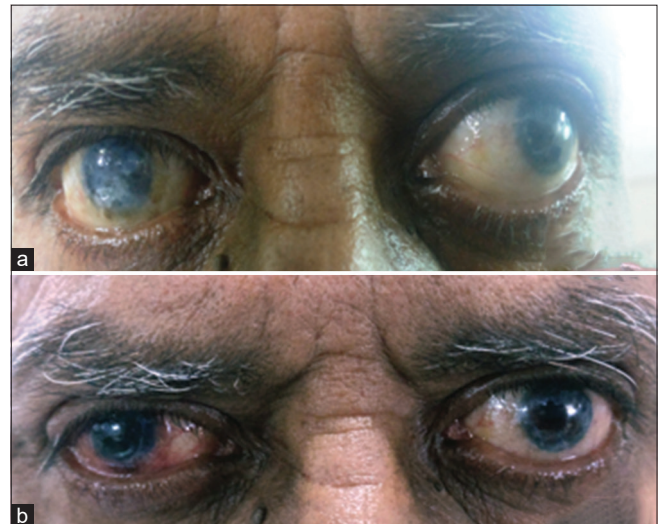


Figure 2: (a) Photograph showing total corneal opacity, sub-epithelial tattoo pigment deposits and exotropia in the right eye. (b) Postoperative photograph showing good cosmetic outcome in the right eye

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Cite this article as: Gujar P, Budhwani M. Combining keratoplasty with corneal tattooing. Indian J Ophthalmol 2020;68:2220-1.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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