MATERIALS
AND METHODS
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The present prospective study was carried out at the Department of Ophthalmology, M.L.B. Medical College, Jhansi. 48 patients with either primary or recurrent pterygia were selected from those attending the eye OPD between March 2001 to April 2002. The criteria for eligibility were as follows:

1. Pterygium growth over the cornea of more than 3 mm
2. No other ocular surface pathology present.
3. At least 6 months should have passed after the last operation in cases of recurrent pterygia.
4. Any infection on the ocular surface or a systemic pathology, which might be a contraindication for ocular surgery.
5. Complaints despite topical treatment with 1 % prednisolone acetate eye drops & a lubricating agent polyvinyl alcohol q.i.d. for 15 days.

After an informed consent patient data including the demographic factors, previous medical, surgical and ocular history were recorded. Best corrected visual acuity (BCVA) before and after surgery were recorded. The characteristics of the pterygia were recorded as follows:

1. Type of pterygium:
   - Primary
   - Recurrent
2. Site
3. Extent
4. Vascularization
5. Site of graft
Recurrence

All patients underwent pterygium excision with conjunctival Limbal autograft transplantation.

**SURGICAL TECHNIQUE**

A standard surgical technique essentially similar to that described by Kenyon et al was performed. The surgical technique involves transferring a free graft of superior bulbar conjunctiva to cover the sclera exposed by pterygium excision and fornix reconstruction. All surgeries were performed under operating microscope and peribulbar anaesthesia.

A rigid lid speculum is used to provide maximal exposure. A superior rectus bridle suture is given to abduct the eye maximally (assuming nasal pterygium) and multiple cautery spots are used to delineate the involved area of conjunctiva, over the pterygium, to be excised.

Beginning at the head of the pterygium, a disposable Bard-Parker blade is used to superficially excise the involved area of cornea to the limbus. Spring action Westcott's Scissors are used for complete circumscision of the conjunctiva at the cautery marks. With blunt dissection, the conjunctiva and Tenon's capsule are freed from the horizontal rectus muscle. Extraocular muscles are identified with a muscle hook and, if necessary, isolated with traction sutures. Especially in recurrent cases, the muscles can become enmeshed in scar tissue, and unless dissected meticulously, can be damaged or severed. Complete resection is done of involved conjunctiva, tenon's capsule and cicatrix; the bare sclera and rectus muscle remain exposed. To preserve vascularity of the graft bed, cautery was minimized and a diamond burr was
not used to polish the involved limbus and cornea. Limbus was performed by
the same Bard-Parker blade no.15 and no lamellar keratectomy was done in
any case. The size of the conjunctival graft required to resurface the exposed
sclera and horizontal rectus muscle is determined with Castroviejo calipers.
The globe is rotated inferomedially by pulling on the superior rectus bridle
suture to expose the uninvolved superior bulbar conjunctiva. The graft
dimensions are marked with several cautery spots. Free grafts as large as
15x15 mm, and extending to the limbus can be prepared and, used without
difficulty.

With sharp, spring-action scissors, the graft is dissected as thinly as
possible in the same manner as a thin conjunctival flap, by taking minimal
subconjunctival tissue; the episclera and tenon’s capsule remain intact. The
donor site requires no suturing or a single suture may be applied and the site
will heal rapidly, without scarring. Also, the graft is more elastic and will heal
with less shrinkage. If the graft is excised such that cautery marks remain
within the graft tissue margins, then the epithelial surface can be identified
when the graft is repositioned. The eye is abducted and the free graft
transferred onto the recipient bed without lifting it up from the limbus but just
by rotating it across the limbus, so as to prevent inrolling of the margins and
inversion of the surfaces of the graft. The graft is anchored in a limbus-limbus
orientation and is secured to adjacent conjunctiva and episclera with
approximately 6-8 interrupted 10-0 monofilament nylon sutures. No sutures
are given on the limbal side of the graft. Postoperatively, all patients received
prednisolone acetate 1% eye drops every 2 hours while awake and
Tobramycin 0.3% and Dexamethasone 0.1% eye ointment at night, both of
which were tapered off in 1 month’s time. Sutures were removed in 3 weeks
time. There were no restrictions on patients’ activity. Conjunctival grafts
revascularise within 3-5 days and become adherent to the sclera prior to suture removal. Topical steroids ointment is continued for about 2 months postoperatively or longer, if inflammation persists. BCVA was measured after 3 weeks of surgery.

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