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Pterygium is an ocular surface disorder characterized by fibrovascular, wing shaped encroachment of the cornea, with a significant propensity towards recurrence after surgical excision. Ultraviolet light induced damage to the limbal stem cell barrier with subsequent conjunctivalisation of the cornea is the currently accepted aetiology of this condition.

When stem cells are damaged by disease or injury, the corneal surface becomes covered with conjunctival epithelium, which is less transparent, more irregular and more prone to erosion and vascularization than normal corneal epithelium.

The vascularity of pterygium tissue may have significance in terms of pterygium severity and progression. The fleshiness of the body of the Pterygium, denoted by obscuration of underlying episcleral vessels by the fibrovascular Pterygium tissue, is a risk factor for recurrence rate after bare sclera excision. The main histopathological change in primary pterygium is elastotic degeneration of the conjunctival collagen.

Indications for surgery include visual impairment, cosmetic disfigurement, motility restriction, recurrent inflammation, interference with contact lens wear and rarely, changes suggestive of neoplasia.

Recommended surgical management includes simple excision with or without adjunctive measures like post operative application of mitomycin-c, beta irradiation with strontium 90, topical thiotepa drops, amniotic membrane transplantation and conjunctival autografting.

Initial experience with postoperative mitomycin-c indicated severe sight threatening complications like scleral thinning, corneal edema, secondary glaucoma, corneal perforation, iritis and cataract formation etc.
Although more recent studies have reported encouraging results and fewer side effects using low dose mitomycin-C, the optimal concentration and duration of application are still being refined. The main difference between bare sclera resection and conjunctival autograft placement is that a free conjunctival graft, usually taken from the superior bulbar conjunctiva, is sutured over the denuded sclera following the pterygium resection. The reported success rates of these techniques vary widely. Simple bare sclera excision has a recurrence range from 24% to 89% while conjunctival autografting has a reported recurrence rate of 2% to 35%.

When surgical techniques proposed for primary pterygium have been applied in recurrent cases, the possibility of secondary recurrence has been shown to increase. Thus, new therapeutic strategies should be searched for, because of the complications of surgical procedures and the high recurrence rate after treatment of this disease.

Recently, as a result of studies on stem cells that lie at the basal layer of the limbus epithelium, conjunctival autografts with limbus epithelium have been suggested in the management of the pterygium.

In this study, the effectiveness of limbal conjunctival autograft transplantation technique to prevent secondary recurrence in the management of cases with primary and recurrent pterygia has been studied prospectively.

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2