Pterygium Surgery and Prevention of Recurrence: Use for Mitomycin C

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Surgical management of pterygium.

- Bare sclera technique. Recurrence between 39 to 90 percent.
- Autograft
- Amniotic membrane
Indication for Surgical Intervention:
- Decreased visual acuity
- Encroachment of the visual axis
- Irregular astigmatism
- Discomfort or irritation not responsive to medical treatment
- Restriction of ocular mobility
- Progressive growth over the visual axis
- Cosmetic deformity
Pterygia is an abnormal overgrowth of conjunctival tissue, which advances across the corneal surface within the interpalpebral fissure. Prevalence is 2 to 7 percent in the United States.
Surgical Management of Pterygia

Conjunctival autograft - more challenging surgical technique

Retrobulbar anesthesia, markedly increased operative time

Graft placement is critical
Surgical Management of Pterygium

Conjunctival autograft
Prolonged healing
Increased discomfort
Suture removal
Scarring of donor graft site
Complications with autografting

Conjunctival graft edema

Dellen

Pyogenic granuloma
Methods: 24 eyes of 24 patients prospectively received 0.15 mg/ml Mitomycin C subconjunctivally into the head of the pterygium one month prior to bare scleral surgical excision.
Results: No patient during the postoperative follow-up period developed a persistent epithelial defect, dellen, or sign of scleral melting.
Results: 23 of 24 patients (95%) showed resolution of the pterygia with a recurrence rate of 4% (mean follow-up 9.2 months).
Conclusion: Subconjunctival Mitomycin C avoids the epithelial and scleral toxicity associated with topical application.
Conclusion: Subconjunctival administration minimizes and titrates exposure to Mitomycin C dosage and is approximately equivalent to one drop of 0.2 mg/ml Mitomycin C.
Conclusions: Subconjunctival Mitomycin C is effective in preventing the progression and recurrence of high risk pterygia.
Subconjunctival injection allows exact titration of Mitomycin C delivery directly onto the activated fibroblast.
Discussion: Subconjunctival injection of Mitomycin C may protect limbal epithelial stem cells and may decrease epithelial toxicity and wound healing abnormalities.
Conclusions: Additional long-term studies are necessary to establish the safety and efficacy of subconjunctival Mitomycin C as adjunctive therapy for pterygium removal.