Pterygium Surgery Technique and Complication Management

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No financial interest

Complications

Dellen
- Patch with antibiotic ointment
- Bandage contact lens
- Tarsorrhaphy

Treat aggressively to avoid thinning and inflammation and reduce risk of recurrence

Scleromalacia
M.A. 59 year-old man pterygium OS
Excision bare sclera, MMC 0.02% drops bid - 3 days

5 years P/O
7 years P/O
9 years P/O

Operation: Lamellar corneal graft & conjunctival graft from fellow eye

3 months P/O

Infection
V.Y. 66 year-old man pterygium OD
Excision bare sclera, MMC 0.02% applied for 3 min

Avascular sclera
Corneoscleral ulcer
Pseudomonas aeruginosa
Melting & perforation

1 month P/O
1 year P/O

Recurrence management

- Usually occurs within 6 months
- More common in younger patients
- Persistent inflammation increases risk
- Premature cessation of topical steroids may lead to recurrence

Extensive resection vs minimal approach

- Hirst advocates large conjunctival resection and extensive tenonectomy.
  He reported a series of 2000 consecutive primary pterygia and 250 consecutive recurrent pterygia without a single recurrence

- Others advocate limited tenonectomy, small conjunctival resection and a small conjunctival graft

- Limited tenonectomy creates less bleeding, avoids rectus muscle involvement. It simplifies surgery and reduces surgical time.

ESCRS meeting Milan 2012
Amniotic membrane vs conjunctival graft

- Amniotic membrane was less efficient than conjunctival graft in preventing recurrence.

- Cosmetic results with amniotic membrane were inferior to conjunctival grafts.

- Amniotic membrane advantageous in large pterygia and scarred conjunctiva, or glaucoma patients who need filtration surgery.

Recurrence management

- Recurrence OS after excision with intraoperative MMC 0.02%.

- Op: limbal transplantation from OD.

Recurrence management

- OD: pterygium recurred twice.

- Limbal conjunctival graft from superior limbus.

- No recurrence.

Invasion of pseudopterygium at harvest site.

Pterygium – astigmatism

- Induces astigmatism with-the-rule.

- Excise pterygium before refractive surgery.

Pterygium surgery & cataract

- Pterygium excision increases spherical power of cornea and reduce astigmatism.

- K values stabilize after 1 month.

- Important with premium IOLs.

Recurrent pterygium – astigmatism

- Avascular scarring post pterygium excision may induce high astigmatism
- This scarring can be misdiagnosed as corneal opacification


Astigmatism

M.K. 79 year old male pterygium OD
Excision bare sclera, MMC 0.02% applied for 3 min
UCVA RE: 20/200 BCVA 20/40 - 6 + 10 X 70

1 m P/O UCVA 20/40 BCVA 20/25 – 2 + 0.5 X 90

Astigmatism post pterygium surgery

- Non removal of leading edge
- Recurrence
- Scarring
- Deep excision

Pterygium – surgical approach

- Gentle corneal scraping
- Minimal conjunctival and Tenon excision
- Avoid Mitomycin C
- Bandage contact lens for 10-30 days
- Prolonged topical steroid treatment
- Limbal transplantation for recurrent cases