

**Project No : 3696/2007**

**To study the incidence and risk factors leading to glaucoma following penetrating keratoplasty in patients having normal intraocular pressure preoperatively**

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### **OBJECTIVES**

Raised intraocular is an important factor for maintaining corneal graft clarity after penetrating keratoplasty. Many factors can raise intraocular pressure after this surgery, one of which may be disparity in the size of the donor and the recipient graft.

### **METHODS**

Thirty patients (phakic, aphakic and pseudophakic) with no preoperative glaucoma underwent penetrating keratoplasty using uniform standards of harvesting of donor corneas, method of surgery, viscoelastic use, 0.5 mm increase in size of donor graft, type of suturing and post operative care. Postoperatively intraocular pressure was noted with the Rebound tonometer and results were analysed.

### **RESULTS**

The overall incidence of post PK glaucoma on day seven was 53.33%. The incidence of the same was higher in the aphakic / pseudophakic groups together with a significant difference having a P value<0.05. In the aphakic group intraocular pressure ranged from 14.8 – 34.4 mm Hg with a mean of 24.02 mm Hg with oral acetazolamide and topical 0.5% timolol maleate.

### **RECOMMENDATIONS**

Aphakic and pseudophakic eyes are at much higher risk of developing glaucoma as compared to phakic eyes and intraocular pressure should be well controlled prior to keratoplasty and should be carefully checked in all postkeratoplasty patients to enable better graft survival. Vascularisation was a common pre and postoperative complication which can be managed with the use of immunosuppressive drugs. Early recognition and immediate attention to the symptoms of graft rejection minimizes the risk of ultimate graft failure.