



Repeat penetrating keratoplasty in patients with herpetic stromal keratitis

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Introduction

- HSV keratitis is the mostly common corneal infection in the world. It is the number one cause of corneal and infectious blindness and a leading indication for corneal transplantation. Late surgical intervention is indicated for management of intractable corneal pain or visual impairment associated with herpetic disease.
- For deeper stromal scarring, penetrating keratoplasty is the procedure of choice. The prognosis for graft survival has improved dramatically over the last quarter century since the introduction of oral antiviral prophylaxis. This can be attributed to reduced recurrence of herpetic epithelial keratitis, a condition that is frequently associated with acute endothelial rejection episodes.

Introduction-Purpose

- Patients who have undergone a repeat penetrating corneal transplant for herpetic stromal keratitis have changeable outcomes; however, some need to have their grafts replaced. Sometimes, graft failure occurs early after surgery, but more often it occurs late, sometimes decades later.
- The aim of this study is to report the clinical outcome of corneal regrafting in adult patients with stromal keratitis of herpetic origin after a failed first graft.

Materials and Methods

- Thirty-two eyes of 32 adults patients having herpetic stromal keratitis and graft failure who underwent repeat PK surgery between January 2005 and January 2012 were evaluated in this retrospective interventional case series study.
- Main outcome measures are graft survival, best-corrected visual acuity (BCVA) in preoperatively and postoperative six months.
- Statistical analysis on graft survival was performed by using the Kaplan–Meier survival analysis.

Results

- At the time of surgery, the mean patient age was 36.08 ± 7.80 years.
- The mean follow-up period was 31.42 ± 14.10 months, ranging from 10 to 67 months.
- 25 of 32 eyes (78.1%) were clear graft at six months after repeat PK.
- No intraoperative complications were observed.
- The mean logMar BCVA of patients were 1.79 ± 0.76 in preoperative period. At 6 months after surgery, the mean logMar BCVA of 25 patients having clear graft was 0.48 ± 0.33 .

Discussion

- Inflammation in the graft bed played a role in reducing repeat graft survival, as was the case for first grafts. The risk factors associated with graft failure in the final multivariate analysis were largely related to inflammation: Allograft rejection and corneal neovascularization postoperatively.
- Graft survival even of repeat penetrating grafts for herpetic stromal keratitis was not indefinite. A patient receiving a first graft for herpetic stromal keratitis is usually young or middle age and is likely to require the graft to be replaced in decades to come. Only time and long-term, prospective observations will reveal whether this approach provides a long-term advantage over penetrating keratoplasty.

Conclusion

- In conclusion, we have shown that repeat penetrating corneal grafts after a failed first graft for herpetic stromal keratitis demonstrate favorable clinical outcome with antiviral treatment and prophylaxis.
- In eyes with active or quiescent Herpetic stromal keratitis but otherwise PK seems to be safe and promising for its favorable visual outcome and graft survival rate.