

The impact of primary disease on two year graft survival of corneal transplants

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On behalf of the UK Transplant Ocular Tissue Advisory Group

Background

UK Ocular Tissue Transplant Audit data collection forms were introduced in April 1999. Completed forms are collected by UK Transplant and currently consist of:

- Transplant Record Form
- Annual Follow-up Forms issued at one year and two years post-transplant
- Five Year Follow-up Form (issued from April 2004)

This study summarised graft survival and indications for graft, using data collected on the Audit forms.

Methods

- Unadjusted survival rates were obtained from Kaplan-Meier estimates
- Only patients considered were those receiving a first Penetrating Keratoplasty (PKP) graft (90.5% of all first grafts)
- Two year graft survival was analysed for first PKP grafts undertaken between 1 April 1999 and 31 August 2001

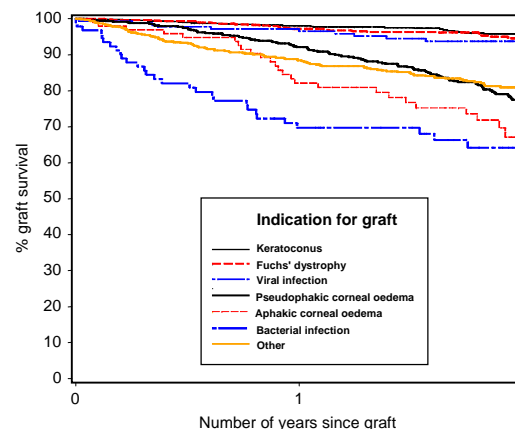
Data

- 3100 first PKP grafts in the time period
- 2418 (78%) first PKP grafts had a complete record of survival at two year follow-up
- Graft indications considered were:
 - Keratoconus
 - Fuchs' Dystrophy
 - Pseudophakic Corneal Oedema
 - Aphakic Corneal Oedema
 - Viral Infection
 - Bacterial Infection

- All other graft indications were grouped together to provide an additional category

Graft survival

TWO YEAR GRAFT SURVIVAL FOR FIRST PKP GRAFTS, BY INDICATION FOR GRAFT



GRAFT SURVIVAL ESTIMATES

Indication for graft	Number at risk on day 0	% two year graft survival	95% confidence interval
Keratoconus	753	96	94-97
Fuchs' Dystrophy	580	94	92-97
Pseudophakic Corneal Oedema	591	77	73-81
Aphakic Corneal Oedema	101	67	56-78
Viral Infection	172	94	90-97
Bacterial Infection	95	64	53-75
Other	621	80	77-84

Significant variation in survival according to indication for graft ($p < 0.0001$)

Graft survival estimates ranged from 64% (Bacterial infection) to 96% (Keratoconus)

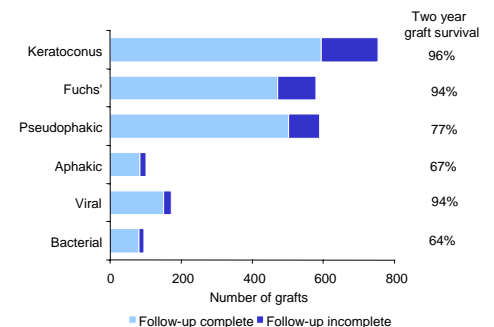
Indications for graft

The main indications reported for the 3100 first PKP grafts were:

- Keratoconus (26%)
- Fuchs' Dystrophy (20%)
- Pseudophakic Corneal Oedema (20%)

Aphakic Corneal Oedema, Viral Infection and Bacterial Infection were also summarised.

FREQUENCIES OF THE MAIN INDICATIONS FOR FIRST PKP GRAFTS



Summary

- There were significant differences in two year graft survival for first PKP grafts according to the indication for graft
- The data quality and completeness of the new Audit forms are of a high standard
- Sufficient data has been collected to enable meaningful analysis of the Audit data