Corneal transplant outcome - a Swedish Register

Akademisk avhandling

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   Br J Ophthalmol 2004;88:858-860

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Aim. The aim of this study was to present different aspects of the outcome after corneal transplantation based on data from the Swedish Cornea Register.

Papers. The first paper describes the register and gives descriptive statistics and analysis of data from a two-year follow up, while the last paper presents data from a ten-year follow up. Papers two and three deal with two specific problems in corneal transplantation, astigmatism and corneal oedema after cataract surgery (bullous keratopathy, BK). Paper four and five compare the Swedish patients with a cohort from the Middle East.

Results. The major indications were keratoconus (29%), BK (21%) and a mixed group of other diagnoses (32%), including regraft. The overall incidence of rejection at two years was 15%, and regrafting, which occurred in 10% of cases was related to rejection and other complications.

Visual acuity (VA) after two years improved most in keratoconus and this was still the case after ten years. Most changes in visual outcome after PK in all indications occurred during the first two postoperative years. Graft survival and VA at ten years depended mainly on complications occurring before two years postoperative.

The mean value of astigmatism at two years was 4.6 D (95% CI 4.4-4.7), independent of indication and preoperative astigmatism. In a group with high astigmatism (mean value 8.4 D) relaxing incisions reduced the astigmatism by 50%. At ten years there was a small increase in astigmatism in all indications.

Bullous keratopathy was one of the indications with poorest outcome. The risk of developing BK at the time of cataract surgery was influenced by pre-existing endothelial disease and cataract surgery done by phaco-emulsification.

In the Palestinian Territories the preponderance of keratoconus was higher than in Sweden. The patients came to surgery with a more advanced disease and more risk factors. They also developed more postoperative complication and the outcome was poorer, even though most gained some visual acuity.

Conclusion. Through the data analysed from the register our knowledge of the outcome after corneal transplantation has increased. The register will also allow evaluation of new techniques of corneal transplantation.

Key words: Corneal transplantation, quality register, long term follow up, astigmatism, bullous keratopathy, graft survival, visual outcome.