

Objective

To assess the impact of donor age on penetrating keratoplasty (PKP) graft success

Methods

Design: Multicenter, double-masked, controlled trial

Sample Size: N = 1090

- Subjects undergoing corneal transplantation for moderate risk conditions

Study variables:

- Donors ages 12 to 75 with endothelial cell densities 2300-3300 cells/mm²

Outcome Measures:

- PKP graft failure at 10-years after transplantation

Results

Point 1: No difference in success in donors 12-65 and 66-75

- There was no significant difference in the 10-year PKP graft success rate for donors aged 12-65 (77%) compared to donors aged 66-75 years old (71%), $p=0.11$

Point 2: Lower graft success at the extremes of age

- Higher donor age was associated with lower graft success after the first 5 years ($p<0.001$), mostly in the donors aged 72-75 group

Point 3: Most cornea transplant donors are aged 34-71

- Approximately 75% of grafts were within this age range and showed a constant 10-year success rate

TLDR: There was no significant difference in 10-year graft success using tissue from donor ages 12-65 and 66-75; particularly, in the cohort 34-71