

Long Term Survival Analysis of Meniscus Allograft Transplantation with Bone Fixation

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Summary:

MAT using bone fixation resulted in high survival rate in long-term observation.

Abstract:

BACKGROUND

Meniscus allograft transplantation (MAT) has shown efficacy in relieving pain and improving knee joint function. However, long-term survival analysis of MAT using bone fixation technique has not been reported yet.

HYPOTHESIS

MAT using bone fixation technique would demonstrate high survival rate in the long-term follow-up.

STUDY DESIGN

Retrospective case series; Level of evidence, 4

METHODS

Of the 52 knees that underwent MAT from December 1996 to December 2005, 49 knees that had less articular cartilage degeneration than ICRS grade IV and had been followed up for more than 8 years were enrolled in this study. Of these, 34 underwent lateral and 15 underwent medial MAT. Clinical outcomes were evaluated using the modified Lysholm score. Failure was defined as total resection of allografts, conversion to TKA and Lysholm score less than 65 or preoperative status. Survival analysis was performed using the Kaplan-Meier method.

RESULTS

The median follow-up period was 11.1 years. Mean modified Lysholm score increased from 73.4 ± 3.2 which significantly increased to 93.0 ± 8.6 at final follow-up ($P < 0.0001$). There were 2 failures noted at 6 months and 11.3 years after MAT, respectively. The 10 year survival rate was 98.0% (95% CI, 94.1 - 100%) and 15 year survival rate was 93.3% (95% CI, 83.7 - 100%) according to the Kaplan-Meier analysis.

CONCLUSIONS

MAT using bone fixation resulted in high survival rate in long-term observation. MAT with bone fixation is considered to be an effective treatment that can delay subsequent TKA for a long time.