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## The Role of Tibial Osteotomy in the Outcome of Meniscus Allograft Transplantation

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**Objectives:** Meniscal allograft transplantation (MAT) is indicated to relieve pain and improve function and hopefully to delay the onset of osteoarthritis in patients with meniscus deficiency.

The purpose of this study was to compare the effect of perioperative cartilage status on survivorship and whether this is influenced by a concurrent tibial osteotomy.

**Methods:** We reviewed a consecutive series of 45 MATs in 42 patients with a minimum post-surgical time of four years. Patients were divided into two groups using the Outerbridge Cartilage Score (OSC) to group 1 (minimal cartilage damage of grade 0-2) and group 2 (severe cartilage damage of grade 3-4). Pre- and post-operative outcome scores were collected using the Lysholm, Tegner, Oxford Knee Score (OKS) and International Knee Documentation Committee (IKDC) subjective knee form. Survival end points were transplant removal and knee arthroplasty.

**Results:** The mean post-surgical follow-up for patients in group 1 (n=14, age 32.0 +/- 9.8) and group 2 (n=31, age 36.2 +/- 10) was 10.6 years (SD +/-3.35) and 7.1 (SD +/-3.34) respectively. There was no significant difference in the mean age between the two groups (p-value 0.221, CI -2.62 to 11). Patients in group 1 demonstrated no failures of the MAT over the time frame evaluated. Group 2 (n=31) had a 74.2% survival of MATs. The clinical outcomes improved in all groups with no significant difference between group 1 and group 2. Those patients in the osteotomy group did not have a statistically significant different survival (Mantel-cox test p-value of 0.922) or clinical outcome.

**Conclusion:** Patient with minimal cartilage status have improved MAT survivorship but both groups benefit clinically. Tibial osteotomy, when indicated, does not influence the outcome of MAT.

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