Abstracts

**Isolated Meniscus Allograft Transplantation Effectively Reduces Knee Laxity In the Presence of Previous Meniscectomy: In-Vivo Navigation of 18 Consecutive Cases**

**Abstract ID# 21993**

All Authors:
Stefano Di Paolo Eng ITALY
Gian Andrea Lucidi MD ITALY
Alberto Grassi PhD ITALY
Luca Macchiarola MD ITALY
Luca Ambrosini MD ITALY
Piero Agostinone MD ITALY
Giacomo Dal Fabbro ITALY
Stefano Zaffagnini MD, Prof. ITALY

**Summary:**
Medial MAT improved kinematics by reducing AP translation and VV maneuver. Conversely, Lateral MAT determined a massive reduction of the PS and mild decrease of the AP translation and VV. 

**Data:**
INTRODUCTION: Even if meniscal allograft transplantation (MAT) is a well-established procedure with satisfactory clinical results, there’s still a lack of evidence on how medial and lateral MAT influences the intraoperative kinematics of the knee. The purpose of the present study was evaluating the intraoperative kinematics of arthroscopic medial and lateral MAT using a surgical navigation system in ACL-intact knees. METHODS: 18 consecutive patients undergoing MAT (8 medial, 10 lateral) were enrolled in this study. A surgical navigation system was used to acquire and quantify the anterior-posterior displacement at 30 and 90 degrees of knee flexion (AP30 and AP90), the varus-valgus rotation at 0 and 30 degrees of knee flexion (VV0 and VV30) and the dynamic laxity in the pivot-shift test (PS), which was determined through anterior displacement of the lateral tibial compartment (APlat) and posterior acceleration of the lateral tibial compartment during tibial reduction (ACC). Data from before and after MAT were compared. RESULTS: After the Medial MAT there was a significant decrease in tibial translation of 2.6 mm (27%; P= .005) for AP30 and 2.3 mm (34%; P=.0197) for AP90, a significant difference of 2.5 (51%; P= .0019) for VVO and 1.7° (31%; P=.0119) for VV30. However, the lateral MAT did not showed any reduction in the PS kinematic data. The Lateral MAT determined a significant decrease in tibial translation of 2.8 mm (43%; P=.005) for APlat and 1.9mm (38%; P=.018) for AP90 as well as a significant difference of 3.6mm (64%; P=.001) for VVO. There was also a significant reduction of the PS of 7.4 mm (39%; P=.021) for APlat and 302.9 mm/s² (75%; P=.005) for ACC. DISCUSSION AND CONCLUSION: Medial MAT improved knee kinematics by determining a significant reduction with particular emphasis to AP translation and VV maneuver. Conversely, Lateral MAT determined a massive reduction of the PS and mild decrease of the AP translation and Varo-valgus.

**Category:** Knee - Meniscus

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**Meniscal Allograft Transplantation Outcome in Adolescents and Young Adults**

**Abstract ID# 22725**

All Authors:
Philip Hanna MD UNITED STATES
Julie P Burland PhD UNITED STATES
Allison Elizabeth Crepeau MD UNITED STATES
Cory M. Edgar MD, PhD UNITED STATES

**Summary:**
Factors such as age, sex and laterality of transplant should be strongly considered when conducting surgical planning for patients eligible for MAT to better understand risks and potential outcomes of the procedure.

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**Analysis of Risk Factors in Arthroscopic Meniscus Repair of Bucket Handle Tear**

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All Authors:
Sang Hak Lee MD, PhD KOREA, REPUBLIC OF
Tae Wook Kim MD KOREA, REPUBLIC OF
Bo Seung Bae MD KOREA, REPUBLIC OF
Sunin Yoo MD KOREA, REPUBLIC OF

**Summary:**
The rate of incomplete healing after arthroscopic repair of bucket handle tear was significantly higher at the medial meniscus than at the lateral meniscus, but there was no difference in clinical failure between bucket handle medial meniscus tear and lateral meniscus tear.

**Data:**
Background: Since bucket-handle tears are usually larger and displaced, their repair can be challenging. There have been few comparative studies evaluating clinical and radiological outcomes of bucket-handle meniscal tears. Purpose: This study aimed to assess the clinical outcomes, failure rate, and risk factors for failure of bucket-handle tears that were treated with arthroscopic repairs. Methods: Seventy-four cases of bucket-handle tears (mean age, 27.2 ± 11.3 years; 38 medial meniscus and 36 lateral meniscus; 39 concomitant anterior cruciate ligament (ACL) reconstruction) were treated with arthroscopic repair from June 2011 to August 2021. The exclusion criteria were revisions, fracture histories, combined with microfracture and root repair. Chi-square test, Fisher exact test, Mann-Whitney test analysis and multivariable Cox proportional hazard ratio model were performed to evaluate the factors. These factors were: age, sex, body mass index (BMI = 25kg/m2), chronicity (≥ 6 months), laterality (medial meniscus or lateral meniscus), and location (posterior horn only, tear involving midbody). They also comprised: tear progression compared with partial meniscectomy.

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