ISAKOS

International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine

9th Biennial ISAKOS Congress • May 12-16, 2013 • Toronto, Canada

Paper #74

Transportal Anatomic Anterior Reconstruction Results in Better Stability Than Conventional Transtibial Anterior Cruciate Reconstruction: A Brazilian Clinical Study

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Summary:
AMP technique reestablished better articular stability function than TT technique. Less extension deficit was more related with transtibial group.

Abstract:
Background:
The traditional transtibial (TT) technique, usually leads to excellent and good results in more than 90% of patients. However, in the last years, biomechanics and anatomic studies had brought into question its ability to restore knee's homeostasis. The anatomic reconstruction concept was developed, as well the transportal (AMP) approach for femoral tunnel creation, placing the graft in a more anatomic position.

Purpose:
The objective of this study is to evaluate clinical results in patients with anterior cruciate ligament reconstruction with transtibial or transportal technique, in the last five years.

Methods:
Seventy one knees undergone to anterior cruciate reconstruction (thirty by the TT technique and forty one by the AMP technique) were followed-up in the last years, in terms of functional scores (subjective IKDC form and Lysholm score), stability – (quantitative pivot-shift, anterior drawer test, Lachman test), KT-1000-MEDmetrics® arthrometer and global articular function (extension and flexion deficit, thigh circumference and monopodalic hop test performance.
Results: AMP technique showed better results in terms of stability tests than TT technique (TT versus AMP: positive pivot-shift: 60% vrs 14,6%, p = 0,00; positive anterior drawer test: 53,3% vrs 17,1%, p=0,002; positive Lachman test: 20% vrs 2,4%, p = 0,037; KT-1000 arthrometer side-to-side difference 2 mm vrs 0,5 mm, p =0,002). Extension deficit was higher in transtibial group (2,5 degrees versus 0,98 degrees, p = 0,013).

Conclusions:
In this series, AMP technique reestablished better articular stability function than TT technique. Less extension deficit was more related with transtibial group.
Keywords: ACL, cruciate, reconstruction, single bundle.