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ACL REPAIR VERSUS ACL RECONSTRUCTION IN CHRONIC LESIONS

Gian Luigi Canata,

Centre of Sports Traumatology, Koelliker Hospital, Torino (IT)

Faculty Disclosure Information

JISAKOS Associate Editor

ESSKA - ESMA Board Member

ISAKOS Board of Directors - Member at Large

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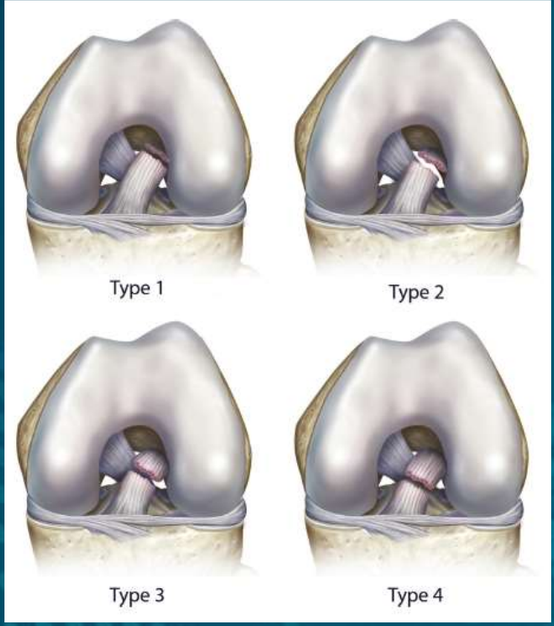
INTRODUCTION

- Recently, a renewed interest in acute primary anterior cruciate ligament (ACL) repair has raised, but even chronic lesions may have similar characteristics. This retrospective study compared long-term results after ACL repair of proximal chronic lesions to a control group of ACL reconstructions.



ORIGINAL ACL TEAR TYPE CLASSIFICATION OF SHERMAN ET AL (Sherman MF et al, Am J Sports Med 1991):

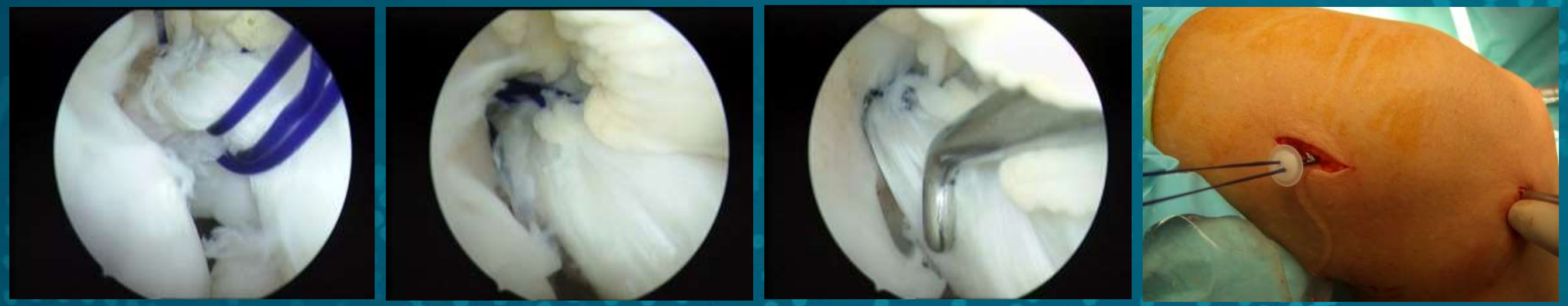
- TYPE I: TRUE SOFT-TISSUE AVULSIONS WITH MINIMAL LIGAMENT TISSUE LEFT ON THE FEMUR
- TYPE 2: UP TO 20% OF TISSUE LEFT ON THE FEMUR
- TYPE 3: UP TO 33% OF TISSUE LEFT ON THE FEMUR
- TYPE 4: TRUE MIDSUBSTANCE TEARS WITH UP TO 50% OF THE LIGAMENT TISSUE LEFT ON THE FEMUR

METHODS

All ACL surgeries performed by a single surgeon between January 2008 and December 2015 were retrospectively evaluated. After applying the inclusion and exclusion criteria, two different groups were identified.

Patients with a chronic, proximal ACL lesion and still a good ligamentous quality underwent an ACL transosseous repair with cortical fixation and formed Group A (n=31, mean age 33 years old, range 13- 70). They were compared to a control group undergoing ACL reconstruction with a bone-to-bone patellar tendon autograft (Group B, n=31, mean age 29 years old, range 14 -56). The reconstruction procedures were all in close temporal proximity to each repair intervention.

Mean follow-up of 7 years (range, 2-9 years).



ARTHROSCOPIC ACL REPAIR AND CORTICAL FIXATION

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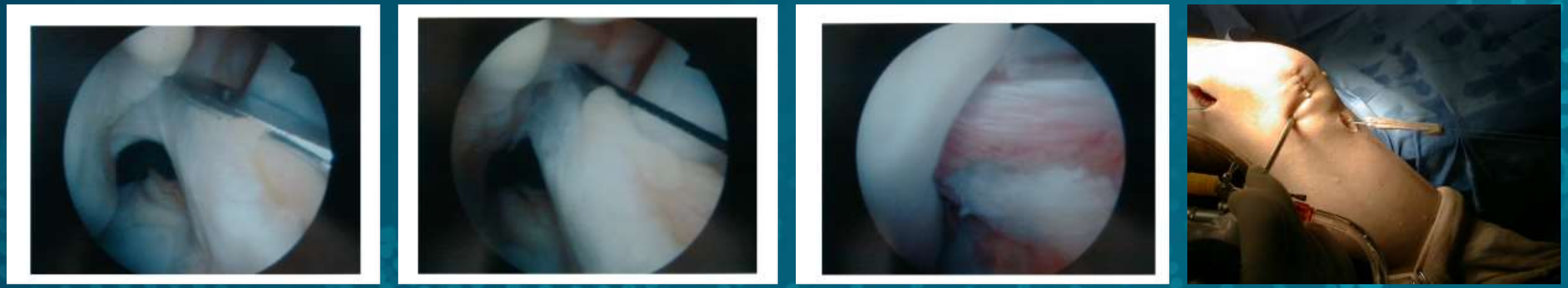
METHODS

Clinical and functional outcomes were measured in terms of anterior drawer test, Lachman's test, Jerk test, KT1000 side-to-side difference, subjective International Knee Documentation Committee (IKDC) Scoring, Knee injury and Osteoarthritis Outcome Score (KOOS), and Tegner activity level scale.

Group differences were compared using Student’s t test and Chi- squared test.



ACL RECONSTRUCTION WITH A BONE-TO-BONE PATELLAR TENDON AUTOGRAFT

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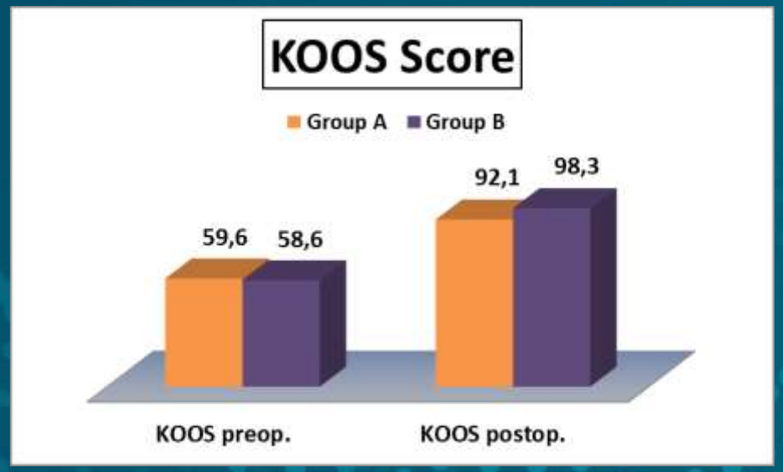
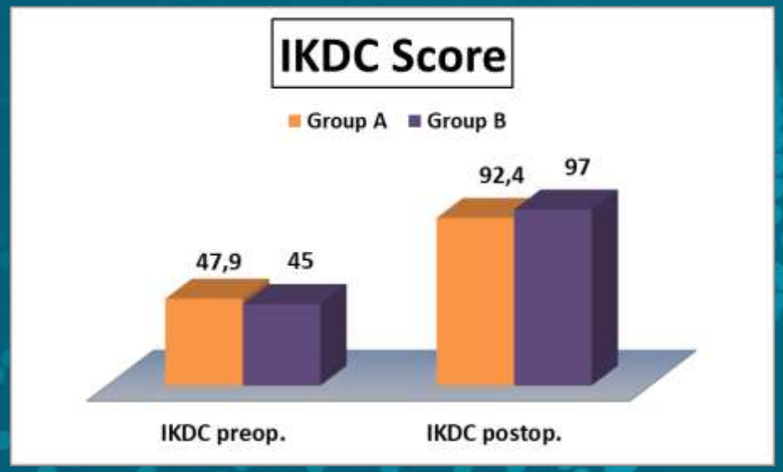
RESULTS

Group B showed significantly better results in the KOOS grade (p=0,036) compared to group A.

No significant differences were found in gender, postoperative anterior drawer test, Lachman's test, Jerk test, KT1000 side-to-side difference, subjective International Knee Documentation Committee (IKDC) Scoring.



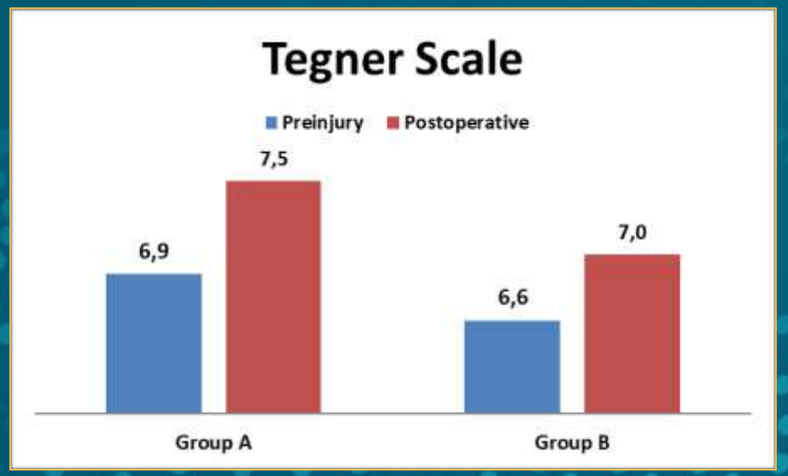


RESULTS

80.65% of patients after ACL repair returned to preinjury levels of performance versus 83.8% of patients undergoing ACL reconstruction. However, no statistically significant difference was found in return to sport between the groups (p=0,7396).

ACL reconstruction had slightly higher outcomes regarding sport activity level.

No significant differences were observed in Tegner activity levels between the groups (p=0,4304).



CONCLUSIONS

Both the two techniques showed good outcomes and low failure rates. These results were approximately comparable, except for the postoperative KOOS values, which were better in the reconstruction group.
Primary ACL repair of chronic, proximal lesions is an effective alternative to ligament reconstruction, even if further research is needed to improve the selection of ideal candidates for repair.

Comparative Study > Knee. 2021 Mar:29:142-149. doi: 10.1016/j.knee.2021.01.028. Epub 2021 Feb 21.

Acute and delayed anterior cruciate ligament repair results in similar short to mid-term outcomes

Harmen D Vermeijden [1], Jelle P van der List [1], Gregory S DiFelice [2]

WHAT IS REALLY FUNDAMENTAL IN ACL REPAIR:

- **SUFFICIENT ACL TISSUE LENGTH**
- **GOOD TO EXCELLENT ACL TISSUE QUALITY**
- **PROXIMAL ACL TEAR LOCATION**

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