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Paper #26

Anterior Cruciate Ligament Reconstruction with or without a Lateral Extra-Articular Tenodesis: Analysis of Complications from the ISAKOS-Sponsored Stability Study

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Summary:
This multicenter randomized clinical trial of young patients treated with ACL reconstruction with or without lateral extra-articular tenodesis (LET) has demonstrated similar rates of adverse events between groups. Whilst an increase in hardware irritation may be seen with the addition of LET, this may be mitigated by the improved rates of stability and improvements in meniscal preservation.

Abstract:

Introduction

The results of our recent multicenter randomized clinical trial investigating anterior cruciate ligament reconstruction (ACLR) with or without lateral extra-articular tenodesis (LET) in patients at high risk of graft failure (Stability Study) suggest that LET reduces rate of ACL failure at two years post operative. However, there is potential for increased rates of complications associated with the additional surgical procedure (LET) that may increase patient morbidity.

Purpose

The purpose of this study is to report the adverse events encountered during the two year follow up period of all patients enrolled in the ISAKOS sponsored Stability Study.

Methods

Stability is an ISAKOS sponsored pragmatic, multicenter, randomized clinical trial comparing standard hamstring tendon ACLR with combined ACLR and LET, utilizing a strip of iliotibial band (Modified Lemaire). Patients aged 25 years or less with an ACL deficient knee were included. Patients were followed for two years with visits at 3, 6, 12 and 24 months postoperatively. At each follow-up period adverse events were documented.

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Results

624 patients were randomized with a mean age of 18.9 (range: 14-25), 293 male. Overall, the rate of complications was low. Contrary to other studies, we found no obvious differences in rates of superficial or deep infection. The addition of the LET saw an increased number of procedure-related complications with more patients complaining of hardware irritation in the LET group (13 vs. 4). 11 of these patients required removal of the LET staple. Whilst underpowered, the rate of new meniscal tear or meniscus repair re-tear was higher in the ACL alone group. It is evident from the primary outcome data that ACL alone resulted in greater degrees of rotational laxity than in the LET group. It's possible that the increased rates of meniscal issues is related to the greater degree of laxity and instability episodes in patients who underwent ACLR without LET.

Conclusions

The addition of LET to single bundle ACL reconstruction may result in increased rates of hardware irritation. However, this issue is mitigated by the increased stability afforded by the procedure and the potential protective effect on the meniscus.