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CORR Insights®: Does Combined Intra- and Extraarticular ACL Reconstruction Improve Function and Stability? A Meta-analysis

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Where Are We Now?

In their meta-analysis, Rezende and colleagues do a good job of evaluating the available evidence on combined intra- and extraarticular ACL reconstruction techniques and how those approaches affect function and stability. Although ACL recon-

struction is a successful operation, resulting in a high likelihood of return to play, recent data from the Multicenter Orthopaedic Outcomes Network group and others found that its results are not as good as we think, particularly in young patients and high-level (high school and collegiate) athletes [1, 2]. Many patients do not return to activities that they previously participated in, and some studies [1, 2] have found a high frequency of ACL graft rupture and contralateral ACL rupture, particularly in young, active patients in the first 1 to 2 years after reconstruction.

In an attempt to improve these results, orthopaedic surgeons have shifted their approach, aiming for more-anatomic reconstructions of the ACL with the use of double-bundle techniques, as well as single-bundle anatomic techniques. There is a renewed interest in the anterolateral ligament of the knee, leading to more studies examining whether this struc-

ture should be addressed during surgery [3–5]. Multiple biomechanical studies have been published showing that the anterolateral ligament of the knee helps control internal rotation particularly with flexion of the knee [3, 5]. A clinical study with Level IV data has shown improved postoperative Lysholm and IKDC scores, as well as no pivot shift in 76 patients and Grade 1 in the remaining seven patients [4].

Where Do We Need To Go?

Addressing other potential sources of instability in the knee could lower the risk of graft rerupture, improve stability, and help patients return to play faster. This meta-analysis sets out to evaluate the addition of an extra-articular procedure of the knee performed with an ACL intraarticular reconstruction. However, the approach did not lead to an overall change in IKDC scores, return to play, graft failure, and Tegner and Lysholm scores. From a scientific standpoint, the authors did a good job of reviewing the pertinent evidence and performing

This CORR Insights® is a commentary on the article “Does Combined Intra- and Extraarticular ACL Reconstruction Improve Function and Stability? A Meta-analysis” by Rezende and colleagues available at: DOI: 10.1007/s11999-015-4285-y.

The author certifies that he, or any member of his immediate family, has no funding or commercial associations (eg, consultancies, stock ownership, equity interest, patent/licensing arrangements, etc.) that might pose a conflict of interest in connection with the submitted article.

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This *CORR Insights*® comment refers to the article available at DOI: 10.1007/s11999-015-4285-y.

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the meta-analysis. However, the study was limited by a small number of comparative trials. Additionally, while the results of the pivot-shift test may look objective, in fact, interobserver (or interstudy) differences may make this finding less reliable. Finally, variability among the source studies in terms of how the ACL was reconstructed may have influenced the findings of this meta-analysis, perhaps in unpredictable ways. Factors that were not well controlled for include the surgical approach, graft type, and graft position. It is worth noting that, many of the extra-articular reconstructions are no longer performed.

Going forward, we need to do a better job of identifying and defining causes of failure. Researchers must determine whether the improvements from additional procedures performed concomitantly with ACL reconstruction outweigh the additional OR time and potential risk factors. It is possible that in a subset of patients, a reconstruction or repair of the anterolateral

ligament of the knee or other procedures will improve outcomes.

How Do We Get There?

Further studies evaluating reasons for failure will help guide us going forward. Before adding an extraarticular procedure to ACL reconstruction, we may need a prospective randomized trial comparing current, anatomic ACL reconstruction techniques with and without an anterolateral ligament reconstruction to determine if the procedure is worth the added surgical time and risk.

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