EDITORIAL NOTE

TO AUGMENT OR NOT TO AUGMENT ?

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The early work of Kennedy showed a decrease in graft strength after intraarticular anterior cruciate ligament (ACL) surgery. Later work by different authors confirmed the slow "ligamentization" of these tendon grafts which did not achieve normal ACL strength even after more than one year. This let to attempts at reinforcement of the biological graft with a synthetic ligament augmentation device (LAD), based on a concept of load sharing.

Numerous studies reported good clinical results with this technique, although there was chronic synovitis and joint effusion in about 5% of the cases. This did still not answer the question whether the LAD really shared load, protected the biological graft, and improved clinical results.

A cadaver study (1) using transducers demonstrated that this load sharing was highly variable and that the LAD carried an average of only 28% of the total graft force in a bone-patellar tendon-bone configuration.

Two clinical studies compared augmented and nonaugmented semitendinosus tendon (2) and patellar tendon (3) grafts in matched patient groups. Both studies could not demonstrate any significant improvement in outcome improvement using the LAD. Moreover the LAD added to the morbidity by infection, synovitis and effusion.

The studies presented in this issue also show that this device is not totally innocuous. A generalized use of the LAD, as well as relying on a synthetic graft augmentation to allow earlier resumption of sports does not seem justified by current scientific evidence. The LAD may however be useful in some particular cases.

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