

ACL reconstructions may last longer with autografts

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Anterior Cruciate Ligament (ACL) reconstructions occur more than 200,000 times a year, but the type of material used to create a new ligament may determine how long you stay in the game, say researchers presenting their work today at the Annual Meeting of the American Orthopaedic Society of Sports Medicine (AOSSM).

"Our study results highlight that in a young athletic population, allografts (tissue harvested from a donor) fail more frequently than using autografts (tissue harvested from the patient)," said Craig R. Bottoni, MD, lead author from Tripler Army Medical Center in Honolulu, Hawaii. "After following the patients for 10 years, more than 80 percent of all grafts were intact and had maintained stability. However, those patients who had an allograft, failed at a rate more than three times higher than those reconstructed with an autograft. This study was also of only one type of allograft (Tibialis Posterior). Therefore, we can make a strong statement about that type and not necessarily extrapolate to other types of allografts, most notably those with bone, i.e. BTB or Achilles."

Bottoni and his team, followed 99 patients who had used either an autograft or allograft for their ACL reconstruction. All allografts were from a single tissue bank, aseptically processed and fresh frozen without terminal irradiation. Graft fixation was identical in all knees. All patients followed the same post-operative rehabilitation protocol. The primary outcome measures were graft integrity, subjective knee stability and functional status.

Eighty-seven of the patients were male with 95 individuals in active duty military. Both groups were similar in demographics and preoperative activity level. The mean and median age of both groups was identical at 29 and 26, respectively. There were four (8.3%) autograft and 13 (26.5%) allograft failures which required revision reconstruction. In the remaining patients whose graft was intact, there was no difference in the mean SANE, Tegner, or IKDC scores.

"By better understanding why and how grafts fail in ACL reconstructions, we can increase the life span of these procedures and minimize future surgeries where feasible," said Bottoni.

Provided by American Orthopaedic Society for Sports Medicine

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