

Graft choice in ACL reconstruction important for surgeons, patients

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Using soft tissue allografts (cadaver tissue) in ACL reconstructions may increase the risks for a revision reconstruction postoperatively, according to research presented today at the American Orthopaedic Society for Sports Medicine's (AOSSM) Specialty Day. The study adds to research demonstrating that the bone-patellar tendon-bone (BPTB) autograft (graft harvested from the surgical patient) remains a strong choice for these surgeries.

"Our research looked at 14,105 cases of ACL reconstruction, including cases with bone-patellar tendon-bone autografts, hamstring autografts, and soft tissue allografts," noted lead author Gregory B. Maletis, MD, from Kaiser Permanente in Baldwin Park, California. "Compared to bone-patellar tendon-bone autografts, allografts processed with 1.8Mrads or high pressure chemical processing had a more than 4-6 times higher risk of revision. This was true even after adjustments for age, gender, and race."

Data for the study was collected from the Kaiser Permanente ACLR Registry. Of the cases analyzed, 4,557 (32.5%) involved bone-patellar tendon-bone autografts, 3,751 (26.8%) soft tissue allograft, and 5,707 (40.7%) hamstring allograft. After a 3-year follow-up, the overall revision rates were 2.5% for BPTP, 3.5% for hamstring autografts, and 3.7% for soft tissue allografts. A time dependent relationship was identified with more highly processed allografts undergoing revision at earlier time frames than less processed allografts. Non-processed soft tissue allografts were not found to have a statistically significantly

different risk of revision compared to BPTB autografts.

"Our research showed that when soft tissue allografts were used, those processed with chemicals or irradiation had an increased risk of revision surgery when compared to bone-patellar tendon-bone autografts," Maletis commented. "These points should be considered by surgeons when shaping surgical decisions to ensure the best possible recovery and future health of patients."

Provided by American Orthopaedic Society for Sports Medicine

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