

Superior outcomes reported for bridging allograft reconstruction vs. maximal repair of rotator cuff

Ivan Wong
Sara Sparavalo
John-Paul King
Catherine M Coady

Video Abstract

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Abstract

Rotator cuff injuries are the most common form of injury to the shoulder. In the case of large and massive, irreparable rotator cuff tears, the gold standard treatment is a partial or maximal repair. Despite short-term pain relief and improved function, however, re-tear rates following maximal repair can range from 50 to 90 percent. That makes it important to explore alternative treatment approaches. In a new study reported in the *American Journal of Sports Medicine*, researchers compared maximal repair to maximal with bridging interpositional dermal allograft in patients with massive rotator cuff tears. Maximal repair recreates the rotator cable much like a suspension bridge to regain rotator cuff function. Bridging interpositional allograft, on the other hand, uses tissue grafts to bridge bone to tendon. Thirty patients with massive, retracted, and irreparable rotator cuff tears were randomly allocated to receive either procedure. All patients completed the WORC and DASH questionnaires before surgery and after, at 6 months, 1 year, and 2 years. And for all patients, researchers recorded healing rate, progression of arthropathy, and postoperative acromiohumeral distances. Compared with patients receiving maximal repair alone, those treated with maximal repair and bridging interpositional reconstruction using dermal allograft showed better post-op scores on the WORC and DASH questionnaires. Additionally, patients in the maximal repair group showed a relative increase in progression to arthropathy, with an increase in re-tear rate. And acromiohumeral distances were maintained in the reconstruction group, whereas they decreased significantly in the maximal repair group. The findings are limited to a single-center study, with all surgical interventions performed by the principal investigator. The results of this trial suggest that maximal repair with bridging interpositional reconstruction using dermal allograft produces better patient-reported and clinically measured outcomes than maximal repair of the rotator cuff alone.