

Dr. Ivan Wong

“Bridging Allograft Reconstruction is Superior to Maximal Repair for the Treatment of Chronic, Massive Rotator Cuff Tears – Results of a Prospective, Randomized, Controlled Trial”

Despite advances in surgical techniques, treatment of large or massive rotator cuff tears results in a high re-tear rate post-operatively when treated with maximal repair. We propose an alternative treatment using acellular dermal allograft bridging reconstruction. This study is a randomized controlled trial comparing bridging reconstruction with the current gold standard treatment of maximal repair. We hypothesized that bridging reconstruction would have better clinical outcomes (as measured by the Western Ontario Rotator Cuff (WORC) index) at the two-year follow-up compared to maximal repair. We randomized a total of 30 patients with 15 in each surgical treatment group. Two years postoperatively, we found that patients treated with bridging reconstruction resulted in better post-operative WORC scores compared to patients who received maximal repair alone. We also noted an increase in progression to rotator cuff arthropathy and an increased re-tear rate in the maximal repair group. The bridging reconstruction group had maintenance of acromiohumeral distance while the repair group showed marked worsening, with 20% of patients going on to end-stage glenohumeral arthritis. The results of this trial demonstrate that bridging reconstruction is an excellent alternative to maximal repair, showing more favorable clinical outcomes two years following surgery. Our results also suggest that maximal repair may not be as benign as once thought since 20% of our repair patients went on to receive a total shoulder arthroplasty. Bridging reconstruction shows favorable healing rates and decreased progression to arthropathy.