

scores were collected and analyzed. A sample of patients underwent an independent clinical follow-up examination by a physician other than the treating surgeon.

Results: ASES, UCLA, and L'Insalata scores were 87.5, 30.0, and 84.3, respectively, corresponding to 87.6% good-to-excellent results. There were no differences in these functional outcomes between those patients who underwent an isolated LHBT transfer (33.3% of this cohort) and those who had concomitant procedures. Forty-two patients (35 male, 7 female; mean age 45.3 years; average follow-up 8.6 years) were available for physical examination. There were no differences in any demographic variable or outcome score between those who were examined and those who were unavailable for examination. Among those who underwent physical examination, there were no significant differences in side-to-side elbow flexion strength or endurance using a 10-pound weight. 85.7% of patients had no tenderness upon palpation of the bicipital groove, 85.7% had a negative thrower's test, and 95.2% of patients had a negative active compression test. Two patients (4.8%) had a Popeye sign. 2% of patients required arthroscopic subdeltoid scar resection. None of the complications seen with other tenodesis techniques occurred in our series (pain at transfer site, fracture, neurovascular injury, infection, or CRPS).

Conclusion: Standardized, validated measures of shoulder function in this largely active, middle-aged cohort revealed excellent results at an average of 5 years after subdeltoid LHBT transfer to the conjoint tendon (range: 2-10 years). These results are consistent with previously reported short-term outcomes, indicating that the early benefits of surgery persist into the mid- to long-term. Arthroscopic transfer of the LHBT to the conjoint tendon is a safe, reliable, and appropriate intervention for selected active patients with chronic, refractory biceps pathology, with durable clinical results. Arthroscopic subdeltoid transfer of the long head of the biceps tendon to the conjoint tendon is a safe, reliable intervention for selected patients with chronic biceps tendinopathy that yields favorable mid- to long-term functional clinical outcomes.

Glenohumeral Osteoarthritis in Young Patients: When is Arthroscopic Management Indicated? A Markov Decision Analysis

SS-20

Thursday, May 1, 3:25 PM

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Introduction: There is little information to guide clinicians about the best treatment for young patients with glenohumeral osteoarthritis (OA). The purpose of this study was to perform a decision analysis comparing arthroscopic management with total shoulder arthroplasty (TSA) for the surgical treatment of glenohumeral OA and to determine the effect of age at surgery on the long-term outcome of each strategy.

Methods: A Markov decision model was constructed to compare arthroscopic management and TSA in patients

with glenohumeral OA. The rates of surgical complications, revision surgery, and death were derived from the literature for each treatment. Additionally, the outcomes, complication rates, revision surgery rates, and the survivorship after arthroscopic management and TSA were included. Outcomes were measured as quality-adjusted life years (QALYs) and the principal outcome measure was the mean QALYs for each strategy. The model was tested over a range of ages to determine the sensitivity of the outcome based on the age at the initial procedure.

Results: The model demonstrated that arthroscopic management was the preferred treatment strategy for patients under 47 and that TSA was the preferred treatment strategy for those over 65 years old. The model was sensitive to a number of factors which included: (1) age at the initial surgery, (2) utilities of the well states after TSA and arthroscopic management, (3) survivorship of TSA and arthroscopic management, and (4) the probability of failure for arthroscopic management and TSA. For the analysis in this young and active population, the utility after arthroscopic management was assumed to be 0.82, while the utility after TSA was set at 0.85. The model was quite sensitive to changes in the utility, and a reduction in the utility of only 0.01 after arthroscopic management decreased the threshold age favoring arthroscopic management from 65 to 47 years.

Conclusion: Arthroscopic management for OA is the preferred initial strategy for younger patients that have failed conservative treatment, while TSA is preferred in older patients. The decision analysis was most sensitive to patient age and the utility after arthroscopic management and TSA. TSA was clearly favored in patients over 65 while arthroscopic management was preferred in those less than 47. Based on the high sensitivity of the model, the data supports two reasonable treatment strategies in patients between 47 and 65 years, where both treatment options are reasonable. Clearly, further mid- and long-term studies evaluating glenohumeral joint preserving arthroscopic strategies and TSA in young patients are warranted to help clinicians with surgical decision-making.

Arthroscopic Examination May Underestimate Shoulder Long Head of the Biceps Tendon Pathology

SS-21

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Introduction: The purpose of this study is to compare arthroscopic versus open examination of the shoulder, proximal, long head of the biceps (LHB) tendon in patients undergoing shoulder arthroscopy followed by open, subpectoral tenodesis. Our hypothesis is that arthroscopic visualization may underestimate LHB pathology versus open observation.

Methods: After statistical power analysis, IRB approval, and patient informed consent, 80 consecutive patients