

Outcomes of Latarjet Versus Distal Tibia Allograft for Anterior Shoulder Instability Repair: A Prospective Matched Cohort Analysis

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Summary:

At an average follow-up of nearly 4 years, fresh DTA reconstruction for recurrent anterior shoulder instability results in a clinically stable joint with similar clinical outcomes and recurrence rates compared to Latarjet.

Abstract:

Background:

Recently, the use of fresh distal tibia allograft (DTA) for glenoid reconstruction in anterior shoulder instability has been described, with encouraging short-term outcomes, however, there is little available comparative data to the Latarjet procedure, long considered the gold standard for bone loss treatment. Thus, the purpose of this study was to determine the clinical outcomes for patients undergoing DTA compared to a matched cohort of patients undergoing Latarjet.

Methods:

A review of prospectively collected data of patients with a minimum 15% anterior glenoid bone loss who underwent shoulder stabilization with either DTA or Latarjet with a minimum follow-up of 2 years was conducted. Consecutive patients undergoing DTA were matched by age, body mass index, and number of previous ipsilateral shoulder surgeries to patients undergoing Latarjet in a 1-to-1 format. Patients were evaluated preoperatively and at a minimum 2 years post-operatively with American Shoulder and Elbow Surgeons (ASES), Single Assessment Numeric Evaluation (SANE), and Western Ontario Shoulder Instability Index (WOSI) outcomes assessments. Complications, reoperations, and episodes of recurrent instability were also analyzed. Statistical analysis was performed with student T-tests, with $P < 0.05$ considered significant.

Results:

A total of 60 patients (30 Latarjet, 30 DTA) with an average age of 26.5 ± 7.8 years were analyzed at an average 46 ± 17 months (range, 24-87) following surgery. Twenty-two patients (73%) in each group underwent prior ipsilateral shoulder surgery (range, 1 to 3 surgeries) prior to Latarjet or DTA. There were no statistical differences in age, BMI, or number of prior surgeries between the groups. There were no differences between the groups in regards to recurrent instability events, subluxation, or apprehension on final examination ($P > 0.8$). Patients in both groups experienced significant improvements in all outcomes scores following surgery ($P > 0.05$ for all). When comparing final outcomes of Latarjet versus DTA, no significant differences were found in postoperative ASES, WOSI or SANE scores between the groups ($P > 0.05$ for all). In the Latarjet group, 1 patient underwent reoperation (3.3%) with arthroscopic debridement with subacromial decompression for persistent anterolateral shoulder pain. In the DTA group, 1 patient (3.3%) underwent reoperation with DTA revision for asymptomatic hardware failure. There were no cases of neurovascular injuries or other complications in either cohort.

Conclusions:

At an average follow-up of nearly 4 years, fresh DTA reconstruction for recurrent anterior shoulder instability results

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in a clinically stable joint with similar clinical outcomes and recurrence rates compared to Latarjet. Longer-term studies are needed to determine if these results are maintained over time.