

Equivalent Postoperative Outcomes after Isolated Biceps Tenodesis Using an Expedited Sling Protocol

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INTRODUCTION: The purpose of this study is to characterize both clinical and patient-reported outcomes for patients after isolated biceps tenodesis (BT) who underwent either standard or expedited sling immobilization protocols following surgery.

METHODS: This study is a retrospective cohort study comparing patients who were assigned to use a sling for either 4-6 weeks (standard) or 0-2 weeks (expedited) following an isolated BT. Primary endpoints included rate of rerupture, surgical revision, loss-of-fixation, and pop-eye deformity. Secondary endpoints included abduction, forward flexion, and external range of motion (ROM) as well as pre- and postoperative patient-reported outcomes (PROs) of pain and function. Missing data was managed via multiple imputation with chained equations. Complication prevalence 95% confidence intervals were calculated using the Clopper Pearson method and a series of hierarchical mixed effects linear regressions were performed to assess differences between sling interventions in PROs and ROM.

RESULTS: The average age of the standard cohort (n=66) was 49 years (± 14) and the average age of the expedited cohort (n=69) was 47 years (± 14). The expedited and standardized cohorts demonstrated 0.4 and 0.3 complications per 10,000 exposure days, respectively, with no significant difference between groups [1.4 (95% CI: 0.2, 10.0), $p = 0.727$]. There was no demonstrated difference in forward flexion, abduction, or external range of motion. The expedited group had less improvement from preoperative pain level as measured by VAS, but no differences in PROs of function. The observed difference in patient-reported pain did not meet the minimal clinically important difference threshold.

DISCUSSION AND CONCLUSION: No clinically significant difference in risk for rates of rerupture, surgical revision, loss-of-fixation, or pop-eye deformity and no significant differences in ROM or PROs were identified between standard and expedited sling rehabilitation protocols after isolated biceps tenodesis. This study suggests that patients who have undergone isolated biceps tenodesis may safely discontinue sling use within 2 weeks after surgery.

