

Timing of Surgical Repair for Traumatic Rotator Cuff Tears

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INTRODUCTION: Traumatic full-thickness rotator cuff tears (FT-RTCs) are often treated surgically due to the acute nature of the tear. Presently, there is continued disagreement regarding appropriate timing for FT-RTC surgical repair following injury. This study aims to evaluate functional outcomes based on timing of surgical repair.

METHODS:

153 patients who underwent RTC surgery after for a tear caused by a traumatic injury from 2014-2021 were retrospectively reviewed. Patients were stratified based on time to surgical repair from the date of injury [<1 month (n=11), 1-3 months (n=52), and >3-months (n=90)]. Dependent variables included ASES, SANE, and VAS pain scores as well as complication rates, ROM, and strength. One-way ANOVA, Kruskal-Wallis and Chi-Squared tests were performed.

RESULTS:

Although the >3-month cohort presented with greater pre-operative forward flexion abduction, external rotation, abduction strength, external rotation strength, and internal rotation strength compared to the 1 month and 1-3 months cohorts, there was no difference in post-operative SANE score, ASES score, ROM, or strength across all follow up visits. The 1-3-month cohort reported lower VAS scores at 12 months postoperatively compared to the >3-month cohort (0.0 vs 2.0). Although not statistically significant, complication rates were higher in the 1-3-month cohort compared to the <4-week (28.8% vs 18.2%) and >3-month (28.8% vs 13.5%) cohorts.

DISCUSSION AND CONCLUSION:

Our study does not show a difference in functional outcomes or patient reported outcomes based on timing of repair, however, timing may affect complication rate. To date, our study is the second largest to examine differences in functional outcomes of traumatic FT-RTCs based on time to surgical repair.¹ Similar studies have shown inconsistent outcomes following early surgical repair, utilizing varying sample populations (range= 4-206) and times to surgical intervention (range= <3 weeks to 12-months). Multi-center collaboration is needed to appropriately determine the impact of early surgical intervention for traumatic FT-RTCs.