

EARLY RETURN OF SHOULDER MOTION AND FUNCTION FOLLOWING SLAP, ROTATOR CUFF, AND COMBINED REPAIRS

Uhl TL*, Kibler WB†, Duerler K†, Cunningham TJ*: *University of Kentucky and †Lexington Clinic, Lexington, KY, USA

Purpose: Current knowledge is unclear if early return of motion and function is similar between all types of rotator cuff repairs (RR)(open and arthroscopic), labral repairs (LR) and combined rotator cuff with repaired superior labral lesions (CR). The purpose of this study was to evaluate the recovery of range of motion and self-reported function during the first 3 months following these three surgical interventions. **Subjects:** 103 patients were followed in physical therapy (PT) with 20 cases being classified as workman's compensation. The distribution of the three surgical types were: RR, n=62 (31 mini open repairs) (age= 56 yrs. \pm 12); LR, n=29 (Age=37yrs. \pm 11); and CR, n=12 (age=42yrs. \pm 9). **Methods:** All subjects were rehabilitated with a kinetic chain approach that facilitated a progressive load onto shoulder musculature. Post-operative early closed kinetic chain shoulder rehabilitation was used to emphasize the core and scapula in order to build a base of stability. Dependent measures were evaluated at initial PT visit and every 2 weeks through the duration of PT were active forward elevation (AFE) and self-reported function on the ASES score. Additionally, the days to initiate PT were compared. A mixed model ANOVA considering surgical intervention, patient type, and weeks of PT was used for statistical analysis with significance level set at $p < 0.05$. **Results:** There was a significant increase in AFE of $60 \pm 52^\circ$ at 2 weeks and an additional $25 \pm 48^\circ$ at 4 weeks from initial evaluation ($p < .001$). AFE found during the entire rehabilitation program was found to be significantly lower for RC ($109 \pm 39^\circ$) compared to LR ($131 \pm 141^\circ$) and CR ($127 \pm 34^\circ$) ($p = .02$). No significant difference was found between surgical groups for ASES scores ($p = .1$). However, workers compensation patients' ASES scores (55 ± 15) were significantly lower than non-worker compensation (70 ± 19) ($p < .001$). With all surgical groups combined, baseline ASES scores were $39 \pm 25^\circ$ and significantly progressed every 2 weeks until 6 weeks to a score of $66 \pm 21^\circ$ ($p < .001$). There was no significant difference found between surgical groups for the days between surgery and initial PT visit (12-18 days, 95% CI), as well as duration of PT (6-8 weeks, 95% CI). LRs used significantly less PT visits (9 ± 7) than the RRs (13 ± 7) and CRs (13 ± 5) ($p = .034$).

Conclusion: It appears from this limited sample that post-operative return of function and motion are critical during the first 6-8 weeks. Combined surgical interventions appear to not have a detrimental effect on post-operative motion and function. AFE differences between surgical interventions appear to not affect perceived function. This is likely due to typical decrease in shoulder motion in an aging population. Health care professionals can use this information to set reasonable goals for their patients during the first 2 months following surgery.