Abstract: ***Outcomes of Revision Rotator Cuff Repair for Patients Receiving Worker's Compensation***

Tyler A. Luthringer MD,[1] Liam T. Kane MD,[1] Alayna K. Vaughn BA,[1] Mark D. Lazarus MD,[1] Surena Namdari MD MSc[1]

[1]Rothman Institute, Philadelphia, PA

Introduction: Relative to the general population, patients with worker's compensation claims are susceptible to poorer outcomes following primary rotator cuff repair. Failure of structural healing can explain some poor results and the outcome of revision rotator cuff repair in this population are unknown. The purpose of this study is to assess treatment success rates of revision rotator cuff repair in terms of returning patients to work and improving functional outcomes.

Methods: We retrospectively reviewed subjects receiving worker's compensation who underwent arthroscopic revision rotator cuff repair at a single institution between January 2010 and April 2020. Preoperative MRI scans were reviewed to assess rotator cuff tear characteristics, Sugaya classification, and Goutallier grade of fatty infiltration. Primary outcome measures included return to work status, further revision surgery, and patient-reported outcome scores (American Shoulder Elbow Surgeons (ASES) score and Single Alpha Numeric Evaluation score).

Results: A total of 27 shoulders among 25 patients were included in the analysis. The patient population was 84% male with a mean age of 54 (R: 39-64), 68% manual laborers, 12% sedentary workers, and 25% with a mixed profession. Average follow-up time was 35.4 months (R: 12-105). Seven patients (26%) were unable to return to work in any capacity. Seven patients (26%) returned to work with permanent restriction. Thirteen patients (48%) returned to work at a full duty status. Forty-four percent of all patients and 55% of manual laborers changed occupation following revision rotator cuff repair. Mean return-to-work time was 6.5 months (R: 1.5-14). Rotator cuff retear was found in 11 cases (40%), 10 of which underwent additional surgery. For the patients who did not undergo further revision, mean ASES functional outcome scores improved from 40.1 (R: 21.7 to 63.8) preoperatively to 68.1 (R: 43.3 to 100) at final follow up ($p<0.01$), while SANE outcomes scores did not demonstrate statistically significant improvement from 49.7 (R: 25.2 to 80.4) preoperatively to 56.0 (R 23.0 to 100) at final follow-up ($p=0.55$). No statistically significant correlation was found between preoperative MRI findings and outcome measures.

Conclusion: Patients undergoing revision rotator cuff repair as part of a workman's compensation claim demonstrated fair improvements in outcomes scores. While some patients are able to return to full duty, the majority were either unable to return or returned with permanent restrictions. This data is helpful in counseling both patients and surgeons regarding expectations of revision rotator cuff repair in this population.