

Postoperative Rehabilitation and Socioeconomic Barriers in Zone II Tendon Injury Recovery

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INTRODUCTION:

Postoperative rehabilitation plays a vital role in functional recovery following Zone II flexor tendon repair. Socioeconomic factors, including access to care and insurance coverage, may influence therapy adherence and outcomes, yet their impact specifically on Zone II injuries remains incompletely characterized. We hypothesize that patients from lower socioeconomic backgrounds, indicated by higher ADI scores, will exhibit lower therapy adherence and poorer functional recovery. Additionally, we propose that patients with extended participation in postoperative therapy correlates with improved functional recovery, emphasizing the importance of tailored postoperative care for diverse patient populations.

METHODS:

Patients at a single academic institution from 2014 to 2024 with Zone II flexor tendon repair reviewed. Demographics, postoperative clinic and therapy visits, Patient-Reported Outcomes Measurement Information System scores, and Quick Disabilities of the Arm, Shoulder, and Hand scores were tallied. Bivariate analysis compared patients attending five or more therapy sessions to those who did not. Area of deprivation was used to divide patients for analysis.

RESULTS:

Overall, 426 patients underwent zone II flexor tendon repair. Therapy was attended by 316 (74.2%) patients for 4 [1, 11] sessions over 8 [0, 14.9] weeks. Socioeconomically deprived patients had varying race and smoking status (both $p < 0.05$) and were more likely to be uninsured ($p = 0.003$). Deprived patients were less likely to attend therapy, and when they did attend, attended fewer sessions (both $p < 0.05$). Pain Interference and Upper Extremity Function were also less favorable at six weeks in the socioeconomically challenged patients. Patients who exceed the median number of visits tended to be older, female patients with higher body mass indexes (all $p < 0.05$). At six weeks, patients who continued therapy had better Pain Interference and Physical Function scores, along with less reported subjective pain (all $p < 0.05$), but by three months these differences equalized.

DISCUSSION AND CONCLUSION: Socioeconomic disadvantage is associated with reduced therapy adherence and worse early outcomes following Zone II flexor tendon repair. Extended therapy participation correlates with improved pain and function at six weeks, highlighting the importance of early, sustained rehabilitation to support recovery and mitigate disparities.