

Flexor Tendon Repair’s Hall of Fame: A Bibliometric Look at the Top 100 Most-Cited Articles

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INTRODUCTION: Flexor tendon repair is a cornerstone procedure for restoring digital function after traumatic lacerations, particularly in Zone II injuries, where tendon healing and gliding present unique challenges. Early-motion rehabilitation protocols have evolved over decades to balance tendon excursion with rupture risk.

METHODS: A bibliometric analysis was performed using the Web of Science Core Collection, Chinese Science Citation Database, Russian Science Citation Index, Arabic Citation Index, Book Citation Index, and SciELO databases, queried on April 23, 2025, with the search terms “flexor tendon repair,” “tendon suture,” “Zone II,” and “digital flexor injury AND repair.” Articles not primarily focused on flexor tendon repair were excluded. The top 100 most cited articles were analyzed for publication year, total citations, citations per year, study design, level of evidence, authorship, institutional affiliation, country of origin, journal name, and journal impact factor.

RESULTS: The top 100 flexor tendon repair articles accumulated 12,466 citations (mean, 75 citations/article). Strickland and Glogovac’s 1995 retrospective comparative study, “Digital Function Following Flexor Tendon Repair in Zone II: A Comparison of Immobilization and Controlled Passive Motion Techniques,” was the most cited. In that study, 50 digits in 37 patients were randomized to 3½ weeks of immobilization versus early passive motion begun within 5 days (with active flexion at 4½ weeks); early passive mobilization achieved 36% excellent and 20% good outcomes (one rupture) versus no excellent results and four ruptures in the

immobilization group. The Journal of Hand Surgery-American Volume was the most prolific journal, publishing 28 of the top 100 articles. Authors from the United States contributed the majority of publications (n = 57), and Jin Bo Tang was the most prolific author. Level IV evidence predominated among the cohort, underscoring the need for higher level trials.

DISCUSSION AND CONCLUSION: Strickland and Glogovac’s foundational comparative series demonstrating the benefits of early passive mobilization remains the most cited flexor tendon repair article. Despite increasing citation trends, the field is still driven largely by lower level evidence. Future research should prioritize multicenter randomized trials, standardized outcome measures, and long term follow-up to inform evidence-based rehabilitation protocols.