Surgical Treatment Trends and Outcomes in Patients with Rheumatoid Arthritis Undergoing Isolated Trigger Finger Release

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INTRODUCTION:
Surgical technique for trigger finger traditionally involves releasing the A1 pulley. However, in patients with rheumatoid arthritis (RA), an A1 pulley release has been thought to accelerate the process of volar subluxation and ulnar deviation of the digit due to an unstable metacarpophalangeal joint. While several studies support the use of tenosynovectomy for severe trigger finger symptoms in patients with RA, there is limited literature comparing the outcomes of RA patients with symptomatic triggering who undergo an A1 pulley release to those who treated with a tenosynovectomy. The purpose of this study was to determine trends in trigger finger surgical treatment in RA patients at a regional academic center, as well as compare the surgical outcomes of RA patients who undergo trigger finger release based on technique utilized.

METHODS:
This retrospective study performed at a single academic center from 2015-2022. Manual chart review was performed to identify patients with RA who underwent an isolated trigger finger release. Demographic information, use of disease-modifying antirheumatic drugs (DMARDs) at the time of surgery, surgical characteristics, one-year complications, and one-year surgical reoperations were collected for all included patients. Patients were then grouped into 2015-2017, 2018-2020, and 2021-2022 cohorts for analysis. Surgical characteristics and outcomes were additionally compared in patients who underwent A1 pulley release to those who underwent other trigger finger release techniques.

RESULTS:
In total, 342 patients with documented history of RA who underwent trigger finger release were included in this study. Of those, 43 patients underwent surgery in 2015-2017, 83 patients in 2018-2020, and 45 patients in 2021-2022. There were no differences in DMARD usage between the cohorts ($p=0.362$) however, patients who underwent surgery between 2015-2017 had lower rates of undergoing at least one steroid injection prior to surgery (62.8% vs. 2018-2020: 81.9% and 2021-2022: 82.2%; $p=0.034$). The 2015-2017 and 2018-2020 cohorts tended to be treated more often with an A1 pulley release-only when compared to the 2021-2022 cohort, however this was not statistically significant ($p=0.104$). When comparing complication ($p=0.370$), postoperative steroid injection ($p=0.706$), and reoperation rates ($p=0.499$), there were no differences between patients who underwent A1-pulley release versus other surgical technique.

DISCUSSION AND CONCLUSION:
While the discussion regarding appropriate surgical management for trigger finger release in rheumatoid patients continues in the hand surgery community, this study shows that the trends in surgical management have not changed in the past seven years at our center. Additionally, this study also determined that when compared to other surgical techniques including flexor tenosynovectomy or A1 pulley release with flexor tendon excision, A1 pulley release alone led to comparable outcomes in terms of complication and reoperation rates. Overall, these results show that A1 pulley release continues to be used in management of RA patients despite classical teachings and theory as well as demonstrates the success of this treatment option for trigger finger in this unique patient population.