Early Removal of Dorsal Spanning Plate with Supplemental Distal Radius Fixation: Is It Safe?

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INTRODUCTION: To evaluate the safety and efficacy of early dorsal spanning plate (DSP) removal at 6-9 weeks in distal radius fractures.

METHODS:

A retrospective review was conducted of patients treated with DSP±supplemental volar plate fixation for unstable distal radius fractures between January 2019-December 2022. Inclusion criteria were adults (≥18years) with distal radius fractures treated with DSP with subsequent removal at 6-9weeks and a minimum of 12-month follow-up. Patients were excluded if they had previous ipsilateral hand, wrist, or forearm surgery or incomplete records. Data on demographics, perioperative details, and radiographic measurements at specific time points (preoperative, immediate postoperative, immediately following DSP removal, most recent follow-up) were collected. Functional outcomes were assessed using the Quick Disabilities of Arm, Shoulder, and Hand (qDASH) questionnaire.

RESULTS: Seventeen patients were included, mean age:53.3±21.7years and mean BMI:27.1±4.2kg/m2. The average time from injury to DSP application was 6.8days, and the average time to DSP removal was 6.97±1.1weeks. The 2R3C3.2AO/OTA classification was the most commonly observed fracture pattern (59%). At an average follow-up of 23.9±11.4months, radiographic assessments indicated sustained anatomic alignment and fracture healing(Table 1). The average qDASH score was 18.9±19.1 at final follow-up, indicative of mild disability. Complications within 90days and at 1-year follow-up were observed in 18%and29% of patients, respectively, predominantly due to paresthesia and superficial wound issues.

DISCUSSION AND CONCLUSION: The primary of this study confirmed the safety and efficacy of earlier DSP removal, within 6-9 weeks postoperatively, resulting in clinical outcomes comparable with historical literature that utilized a traditional 12-16 week timeline. Future studies could evaluate whether earlier plate retriever allows for an accelerated rehabilitation protocol and its impact on return to work timeline, as well as its potential in reducing postoperative stiffness.