

## **CORRELATION BETWEEN VOLAR PLATE POSITION IN DISTAL END RADIUS FRACTURE FIXATION AND IMPLANT REMOVAL FOLLOWING SURGERY**

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**Introduction:** Open reduction and plate fixation for distal end radius fracture offers stable fixation for early rehabilitation. However, 3-10% of plates were removed post-surgery due to complications such as tendon rupture. This study was conducted to analyze the effect of plate position on postoperative complications requiring implant removal.

**Methodology:** In this retrospective study conducted in 2015-2019, all patients who had volar plate fixation for distal end radius fracture at our center were reviewed. Patients were divided into two groups: Group I – no implant removal; Group II – implant removal. Postoperative x-rays of both group were analyzed using PACS system. The horizontal distance between distal plate medial border to sigmoid notch and distal plate lateral border to radial styloid were measured. Sagittal plate position was classified using Soong classification. Patient demography, surgical technique and postoperative complications were also documented. All data were analyzed with SPSS.

**Discussion:** 67 patients were included in this study. Most of them are male with an average age of 45 years. 67%(13/18) of implant removal were done due to pain. There was no significant difference in age, gender or fracture pattern distribution between the two group. However, there was a statistically significant difference ( $p<0.05$ ) in the soong grading, distance between medial plate border to sigmoid notch, surgical approach and intraoperative pronator quadratus repair between the two groups

**Conclusion:** Volar plate placement, surgical approach and intraoperative pronator quadratus repair is important in distal end radius fracture fixation to avoid complications which may require removal of implant.