

308 The Effect Of COVID-19 On Hand Trauma Management: A Single-Centre Correlation Study, Inter-Rater Agreement and Functional Outcomes

D. Rojoa, F. Raheman, E. Irvine, V. Sharma, C. Macdonald, L. Cutler
Leicester Royal Infirmary, Leicester, United Kingdom

Introduction: Management of hand trauma has evolved to incorporate assessment, treatment and rehabilitation of patients in a 'one-stop' clinic on initial presentation. Our aim was to evaluate the effect of COVID-19 on hand trauma management using inter-rater agreement between hand surgeons.

Method: Patients with hand fractures were consecutively assessed from March to May 2020, with at least 6-month follow-up outcomes. Two experienced hand surgeons blinded to management and outcomes independently reviewed radiographic images and clinical history to provide their opinion on optimal treatment. Weighted-kappa analysis was performed for concordance and inter-rater agreement between the two surgeons and actual management.

Results: 268 patients were identified, 82 had fractures involving tubular bones of the hand. 62 were male and 20, female. Mean age was 40.3 (SD 19.7). Mechanism of injury was secondary to home-related injuries (34%) and falls (28%). Fractures involving the metacarpals (n = 24) and distal phalanx (n = 20) were most commonly seen. 35 patients underwent surgery whereas 47 were managed conservatively. Overall agreement between actual management and both consultant-1 and consultant-2 was moderate ($\kappa = 0.55$, $p < 0.0001$ and $\kappa = 0.63$, $p < 0.0001$, respectively). Subgroup analysis showed a weak agreement between actual management of metacarpal fractures and both consultant-1 and consultant-2 ($\kappa = 0.22$, $p = 0.29$ and $\kappa = 0.47$, $p = 0.02$, respectively). Inter-rater agreement was substantial for management of metacarpal fractures ($\kappa = 0.73$, $p < 0.0001$) whilst functional outcomes were comparable as reported by patients.

Conclusions: Our study has shown that overall management of hand fractures remained optimized throughout the pandemic. However, lack of concordance was observed in the management of metacarpals through substantial inter-rater agreement but overall poor agreement.