

AB071. SOH21AS091. The impact of coronavirus disease 2019 (COVID-19) on the management of hand fractures: a concordance study through inter-rater reliability

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Background: The current global pandemic due to coronavirus disease 2019 (COVID-19) is generating significant burden on health services. As a result, management of hand trauma has evolved to incorporate assessment, treatment and rehabilitation of patients in a 'one-stop' clinic on initial presentation. Whilst it is early to qualitatively assess the impact of these changes, we must evaluate the potential effect of COVID-19 on surgical management of patients with hand fractures. Our aim was to determine interrater agreement between hand surgeons and concordance of hand fracture management during the COVID-19 period

Methods: Patients with hand fractures were consecutively assessed from March 2020 to May 2020. Demographic data, mechanism of injury, fracture patterns and type of management (operative *vs.* conservative) were recorded. Radiographic images of randomised patients were obtained using PACS (picture archiving and communications system). Two experienced hand surgeons (Consultant-1 and Consultant-2) blinded to management and outcomes independently reviewed the radiographic images and relevant clinical history to provide their opinion on optimal treatment. Weighted kappa analysis was performed to determine concordance and interrater agreement between the two hand surgeons and actual management.

Results: A total of 268 patients were identified, of which 82 had fractures involving tubular bones of the hand. Sixty-two were male and 20 were female. Mean age was 40.3 (SD 19.7). Mechanism of injury was often secondary to home-related injuries (34%) and falls (28%). Fractures involving the metacarpals (n=24) and distal phalanx (n=20) were most commonly seen. Thirty-five patients underwent operative treatment 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). There was 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). In contrast, good agreement was observed for proximal and middle phalanx fractures and actual management ($\kappa=0.82$, $P=0.001$ and $\kappa=0.84$, $P=0.002$ respectively). Interrater agreement was substantial for management of metacarpal fractures ($\kappa=0.73$, $P<0.0001$).

Conclusions: Our study has shown that COVID-19 may have affected the decision making and counselling of patients with hand fractures. Lack of concordance was observed in the management of metacarpals through substantial interrater agreement but overall poor agreement.

Keywords: Coronavirus; hand fractures; management; outcomes; trauma

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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