

The Impact of COVID-19 on a Hip Fracture Service

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ABSTRACT

This retrospective observational study analysed the impact of the initial COVID-19 surge on the hip fracture population in a high-volume tertiary trauma centre. The study analysed a two-month period following the onset of lockdown from the 24th March 2020 to 23rd May 2020 and compared this to the same two-month time period in the years 2015-2019. It included patients over 60 years old who were admitted with a hip fracture. It excluded patients with high-energy injuries and pathological fractures.

During the study period in 2020, 126 hip fracture patients were included, compared to an average of 114.8 patients per year in 2015-2019. This suggests that despite nationwide advice to avoid unnecessary social contact and remain at home where possible, a cohort of patients will continue to fall and sustain hip fractures.

Aerosol generating procedures were avoided where possible in 2020, with an increased use of neuraxial over general anaesthesia demonstrated ($p=0.0001$).

30-day mortality in 2020 was also similar to 2015-2019 for both surgically and conservatively managed patients, highlighting the ability to maintain high standards of care despite the organisational changes made during surge planning.

Only 7.1% of patients tested positive for COVID-19, all of which were operated on (9/122 positive, 113/122 negative, 4/122 no result). The 30-day mortality rate of COVID-19 positive patients was 22%, compared to 2.7% in COVID-19 negative patients ($p=0.05$).

This study demonstrates the ability to maintain an effective hip fracture service with largely unchanged outcomes during the height of the COVID-19 pandemic. Strengths of the study included robust follow-up and the ability to compare our results to retrospective pre-pandemic data. The study also suggested increased mortality in COVID-19 positive patients undergoing surgical management. The inclusion of only nine COVID-19 patients and the high rates of spinal anaesthesia may limit conclusions, with further research warranted to answer questions raised, such as timing of surgery in COVID-19 positive patients who require hip fracture surgery.

Keywords: Surgical management, Surge planning, COVID-19, High-energy injuries

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