

Is There an Excess Mortality in Geriatric Patients With Femoral Neck Fractures Due to Low Intensive Care Capacity Caused by Covid-19?

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Purpose: Since March 2019, increasing numbers of hospitalized patients with Covid-19 infection have been registered. The first as well as the second wave necessitated extensive restructuring of hospital infrastructure. In particular, the provision of intensive care capacity was prioritized. Elective surgeries in all surgical disciplines were postponed to preserve intensive care capacity for Covid-19 patients. However, emergency care of trauma surgery patients had to be maintained. Polytraumatized as well as geriatric patients with proximal femoral fractures often require postoperative intensive care monitoring and therapy. This study sought to investigate a possible excess mortality of geriatric patients with femoral neck fractures due to low intensive care capacity because of Covid-19.

Methods: All patients over the age of 65 years between March 2019 and March 2020 who underwent surgical treatment for femoral neck fractures were included. This cohort was compared with all patients over age 65 who received surgical treatment for femoral neck fractures during the period of the pandemic between March 2020 and March 2021 with attention to potential excess mortality due to low intensive capacity. Demographic data, American Society of Anesthesiologists (ASA) score, type of surgery, ICU stay, surgical and nonsurgical complications, and mortality were analyzed and compared.

Results: We included a total 356 patients with 178 in each cohort with a mean age of 82.7 years in the normal group and 84.8 in the Covid group ($P < 0.05$). No significant difference was seen in sex and ASA scores. During the period of the pandemic, patients with hip fractures were treated significantly shorter in ICU (0.4 ± 0.9 vs 1.2 ± 2.8 days; $P < 0.05$), time to surgery was shorter (29.9 ± 8.2 vs 16.8 ± 5.3 hours; $P < 0.05$), and operations were significantly more often performed out-of-hour (4 pm-12 am 47.8% vs 56.7%; 12 am-8 am 7.9% vs 13.5%, $P < 0.05$). Interestingly, mortality was lower during the pandemic; still, the difference did not reach significance (6.7% vs 12.4%, $P = 0.102$).

Conclusion: During the pandemic, the intensive care capacity was preserved for Covid patients. Due to a change in the law of the Joint Federal Committee with effect from January 1, 2021, all patients with proximal femur fractures had to be operated within the first 24 hours, which is why a significantly shorter time to surgery was observed during the pandemic period. As a consequence, a lower mortality rate in the pandemic period was observed compared to pre-pandemic, although no significance could be reached.