Impact of COVID-19 Pandemic on Elderly Patients with Hip Fractures

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Purpose: Since the first COVID-19 outbreak in our country, it has brought many changes throughout the medical field. Hip fracture patients need early surgery to minimize postoperative complications and to prevent delays in rehabilitation, prolonged hospital stays, and high mortality. The COVID-19 pandemic has necessitated COVID-19 screening in hospitalized patients, necessitating delays in hospitalization until the results of viral tests are available. In this study, we tried to analyze the effect of the COVID-19 pandemic on elderly patients with hip fractures.

Methods: From February 2018 to January 2021, 563 patients aged 70 years or older who underwent surgical treatment for hip fractures and were followed up for at least 1 year after surgery were enrolled. The study consisted of 289 patients who underwent intramedullary nailing for intertrochanteric fractures and 274 patients who underwent bipolar hemiarthroplasty for a femoral neck fracture. As of January 2020, patients were divided into 2 groups (pre-pandemic and pandemic groups). Patients who tested positive for COVID-19 were excluded. Gender, age, body mass index (BMI), bone mineral density (BMD), American Society of Anesthesiologists (ASA) score, time from admission to operation, time from injury to operation, and operation time were investigated, and postoperative complications and mortality were compared.

Results: There was no significant difference between the 2 groups in patient factors such as age, gender, underlying disease, BMI, BMD, ASA score, and operation time. The time from injury to operation was longer in the pandemic group than pre-pandemic group, showing a significant difference (4.61 days vs 3.74 days, P = 0.026). There was no significant difference in the time from admission to operation. The incidence of postoperative medical complications was higher in the pandemic group than pre-pandemic group, showing a statistically significant result (51.88% vs 41.44%, P = 0.025). There was no significant difference in 1-month mortality, but 1-year mortality after surgery was higher in the pandemic group (27.50% vs 19.35%, P = 0.034).

Conclusion: The time from injury to operation for fragile elderly patients who underwent surgery for hip fractures was significantly delayed during the COVID-19 pandemic. It is judged that the delay in the time from injury to admission due to strict confirmation procedures such as COVID-19 polymerase chain reaction screening and quarantine significantly increased postoperative medical complications and 1-year mortality rate.