Early Morbidity and Mortality in 50 Very Elderly Patients After Posterior Atlantoaxial Fusion for Traumatic Odontoid Fractures.

Abstract:
Traumatic odontoid fractures (tOFs) in the very elderly are associated with high morbidity and mortality. The best treatment strategy (conservative vs. surgery) is still unclear. Between April 2008 and April 2014, fifty (17 male, 33 female) patients (mean age 87.2 ± 4.4 years; range: 80-99) were included in this retrospective cohort study. All patients underwent posterior fusion surgery for tOF. Early outcome, morbidity and mortality, length of hospital and intensive care unit (ICU) stay, comorbidities, and perioperative complications were assessed. The mean age-adjusted Charlson Comorbidity Index (CCI) was 5.8 ± 3.9 (range: 0-13), and the mean American Society of Anesthesiologists score was 3 ± 0.5 (range: 2-4). Surgery was delayed in 48% of patients. Thirty percent of patients had preoperative complications (72.4% severe), of which a leading cause was dysphagia with subsequent pneumonia, and 18% required preoperative assessment or improvement of health status. Surgery-related complications were experienced in 14% with no neurovascular lesion. Postoperative medical complications occurred in 52% of patients (67.3% severe). Major complications were mostly respiratory/pulmonary (66.7%), of which postoperative pneumonia (36.4%) was leading. Twenty-four percent of patients were ICU monitored. Mean length of ICU stay
was 9 ± 6.6 days (1-20). Mean length of hospital stay was 15 ± 8.6 days (4-56). There was no
in-hospital mortality, and 30-day mortality was 6%. Posterior fusion for tOF in patients 80 years or
older seems to be a feasible treatment option in these high-risk patients. Despite a high incidence of
severe comorbidities and perioperative complications, outcome was satisfactory. Our research was a
retrospective cohort study, Level III.