

## **RISK FACTORS FOR DELIRIUM IN GERIATRICS UNDERGOING MAJOR ORTHOPEDIC SURGERIES**

### **ABSTRACT**

**BACKGROUND:** Delirium is associated with different kinds of risk factors and came from various mechanism. People with high vulnerability such as geriatric population are more prone to delirium. Delirium is perceived as a common surgical complication but should be considered a serious problem. Delirium could increase geriatric's morbidity and mortality as well as prolonged length of stay in hospital and higher health care costs.

**OBJECTIVE:** The aim of this study was to determine the incidence of postoperative delirium (POD) and the risk factors accompanying it in geriatrics undergoing major orthopedic surgery.

**MATERIAL AND METHOD:** This is a retrospective cross-sectional study with sample of patients scheduled for elective major orthopedic surgery. POD was diagnosed a neurologist using DSM-V. Descriptive analysis were performed with Mann-Whitey U, or Chi-Square test. Logistic regression analysis was used for evaluation of independent determinants of POD.

**RESULT:** POD was found in 20 patients (10%). Patients who developed POD were older (median age, 79 vs 72 years;  $p < 0.006$ ); more affected when having restriction in mobility, were treated in the ICU, suffered from sleep disturbance, had a higher Charlson Comorbidity Index (median score, 4 vs 3;  $p < 0.000$ ); lower preoperative albumin level (mean, 2.7 vs 3.82 g/dL;  $p < 0.015$ ); lower preoperative hemoglobin (mean, 11.41 vs 12.62 g/dL;  $p < 0.002$ ); lower postoperative hemoglobin (mean, 10.85 vs 12.01 g/dL;  $p < 0.001$ ); and effected by type of anesthesia.

**CONCLUSION:** The incidence of POD after orthopedic surgery in this study (10%) is consistent with other literature (8-10%). Among geriatrics undergoing major orthopedic surgery: mobility restriction, sleep deprivation, higher CCI, and longer duration of surgery were associated with an increased risk for POD.

**Keyword:** Postoperative Delirium, Geriatrics, Major Orthopedic Surgery, Risk Factors