

Independent Association Between Pre-Operative Cognitive Status and Discharge Location After Surgery:
A Strategy to Reduce Resource Use After Surgery For Deformity

Owoicho Adogwa M.D. M.P.H; Aladine A. Elsamadicy BE; Amanda Sergesketter; Victoria Vuong M.S.; Syed Ibad Khalid;
Jessica Rose Moreno MS, BSN, RN; Joseph S. Cheng MD; Isaac O. Karikari MD; Carlos Antonio Bagley MD

Introduction

The aim of this study is to determine if preoperative scores on a screening measure for cognitive status (the Saint Louis Mental Status), were associated with post-operative length of stay and discharge to a location other than home in elderly patients undergoing surgery for deformity.

Methods

Elderly subjects 65 years and older undergoing a planned elective spinal surgery for correction of adult degenerative scoliosis were enrolled in this study. Pre-operative baseline cognition was assessed using the validated Saint Louis Mental Status (SLUMS) test. SLUMS is made up of 11 questions, which can give a maximum of 30 points. Mild cognitive impairment was defined as a SLUMS score between 21 – 26 points, while severe cognitive impairment was defined as a SLUMS score of =20 points. Normal cognition was defined as a SLUMS score of =27 points. Post-operative length of stay and discharge location were recorded on all patients.

Results

Eighty-two subjects were included in this study, with mean age of 73.26 ± 6.08 years. 51% of patients were discharged to a facility (skilled nursing or acute rehabilitation). Patient gender, increasing age, baseline cognitive impairment, non-ambulatory status pre-operatively, history of MI, PE or DVT were associated with discharge to a facility in univariate analysis, and used as covariates in adjusted models. After adjustment, patients with pre-operative cognitive impairment were four times more likely to be discharged to a facility (skilled nursing or acute rehabilitation) compared to patients with normal cognitive status (adjusted odds ratio[OR] 3.93). In addition, patients that were non-ambulatory prior to surgery were also more likely to be discharged to a facility (adjusted odds ratio[OR] 7.14)

Conclusions

In geriatric patients undergoing surgery for deformity correction, cognitive screening prior to surgery can identify patients with impaired cognitive status who are less likely than those with normal cognitive status to return home after surgery.

Learning Objectives

By the conclusion of this session, participants should be able to:

- 1) Describe the importance of cognitive status and discharge location.
- 2) Discuss, in small groups, strategies to reduce resources through adequate discharge locations