

Outcomes, Costs of Hospitalization and the Regional Trends in Spinal Cord Tumor Surgery: A United States Nationwide Inpatient Sample Analysis from 2003-2010

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Introduction

The aim of our study was to analyze the incidence of adverse outcomes and inpatient mortality following resection of Intramedullary spinal cord tumors (IMSCTs) using the US national database.

Methods

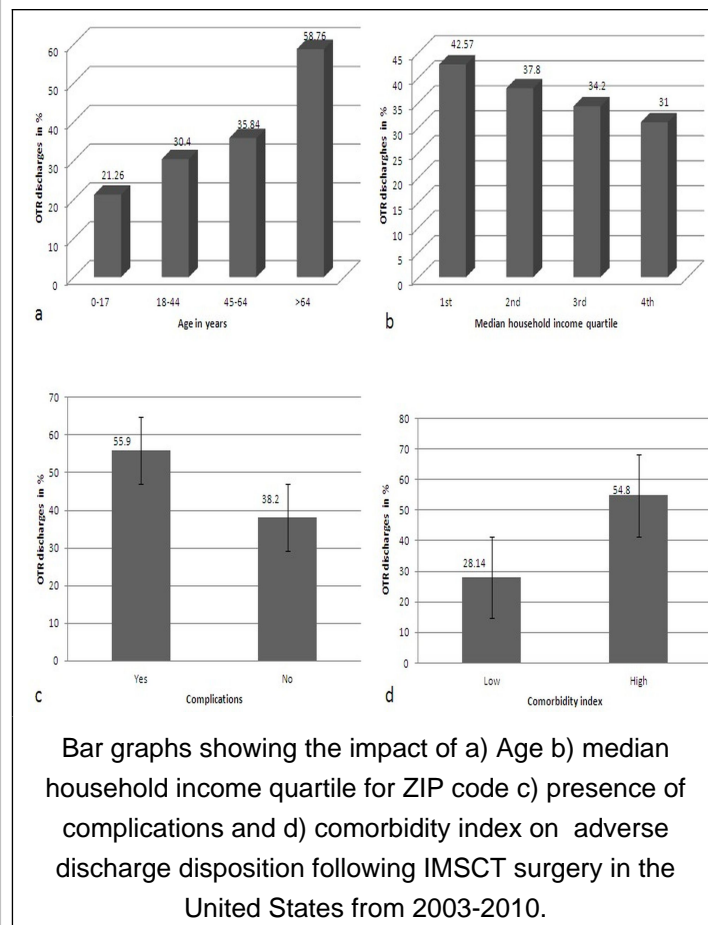
This is a retrospective cohort study using the Nationwide Inpatient Sample (NIS) from 2003-2010. The adverse discharge disposition, in hospital mortality and the higher cost of hospitalization were taken as the dependent variables.

Results

A total of 15545 admissions was identified from the NIS database. The mean patient age was 44.84+ 19.49 yrs and 52% (n= 7938) of the patients were males. 64.1% (n=9917) of the patients were discharged to home or self care and the overall in-hospital mortality rate was 0.46% (n=71). The mean total charges of hospitalization increased from \$45452.24 in 2003 to \$76698.96 in 2010. Elderly patients, female sex, black race and lower ZIP code income were the independent predictors of other than routine (OTR) disposition ($p < 0.001$). Private insurance had shown a protective effect against OTR disposition. Patients with higher comorbidity index (OR 1.908, 95% CI 1.733-2.101, $p < 0.001$) and with complications (OR 2.214, 95% CI 1.768-2.772, $p < 0.001$) were more likely to have an adverse discharge disposition. Hospitals with larger bed size and in the northeast region independently predicted the OTR discharge disposition ($p < 0.001$). Admissions on weekends and non elective admission had significant influence on the disposition ($p < 0.001$). Weekend and nonelective admissions were found to be independent predictors of inpatient mortality and the higher cost incurred to the hospitals ($p < 0.001$).

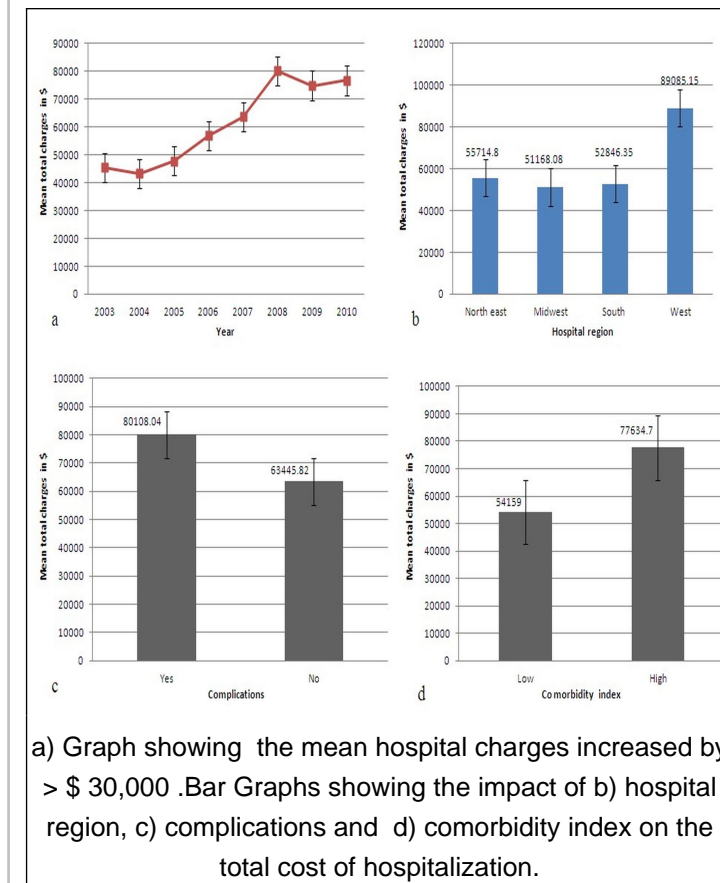
Conclusions

Elderly patients, lower median household income, non private insurance, higher co morbidity index, presence of complications, larger hospital bed size, Northeast region, weekend and non elective admissions were the independent predictors of adverse discharge disposition. Young patients, higher median household income, non private insurance, presence of complications, higher co morbidity index were the strongest predictors of higher cost incurred to the hospitals.



Learning Objectives

Participants should be able to identify various patient and hospital related variables that can influence the discharge disposition, in hospital mortality and the total cost incurred to the hospitals.



References:

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- 2.Barker FG, 2nd: Craniotomy for the resection of metastatic brain tumors in the U.S., 1988-2000: decreasing mortality and the effect of provider caseload. Cancer 100:999-1007, 2004