



## Introduction

Treatment of craniopharyngiomas is one of the most surgically demanding and controversial neurosurgical diagnoses. We sought to evaluate national treatment trends for the disease and to determine factors associated with resource utilization to identify possible opportunities for improving healthcare economics.

## Methods

We analyzed the Nationwide Inpatient Sample (NIS) hospital discharge database from 2007 to 2011 to examine national treatment trends for adults (>18 years) who had undergone surgery for craniopharyngioma. A multistep regression model was developed that adjusted for patient demographics, acuity measures, comorbidities, hospital characteristics, and complications to predict the drivers of resource utilization.

## Results

606 patients underwent surgical resection of craniopharyngioma, 353 by a transsphenoidal approach and 253 by a transcranial approach. The mean age was  $47.7 \pm 16.3$  years. The average hospital length of stay was  $7.6 \pm 9$  days. The mean hospital charge was  $\$92,300 \pm 83,356$ . Fifty-three percent of patients experienced diabetes insipidus or an electrolyte abnormality. A multivariate regression model demonstrated that length of stay (LOS), year of surgery, hospital volume, postoperative complications, comorbidities, and surgical approach emerged as significant predictors of resource utilization. The proposed model accounted for 54% of hospital charge variance.

## Conclusions

This analysis of hospital charges in craniopharyngioma surgery sheds light on the drivers of resource utilization. It also presents a review of national surgical outcomes for the disease.

## Learning Objectives

Craniopharyngiomas are surgically challenging lesions which necessitate a multidisciplinary approach to pre- and post-operative care. Until now, national treatment trends and resource utilization have not been well studied. This data provides a snapshot of inpatient mortality rates, complication rates, and patient characteristics. After accounting for demographic information, patient acuity variables, hospital characteristics and complications, we found several clinical variables associated with in-hospital charges for craniopharyngiomas, such as length of stay, institutional volume, complications, and patient comorbidities. Identification of drivers of resource utilization may help improve efforts to optimize resource utilization.

## References

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