Post-Operative ICU Admission for Elective Craniotomy for Intra-axial Brain Tumor Resection

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Introduction

We reviewed our practice at the University of Kentucky in order to assess the safety of admitting adult and pediatric patients to floor beds after craniotomy, exclusively for intra-axial brain tumor resection.

Methods

Retrospective chart review of patients, adults and pediatric, who underwent craniotomy by a single surgeon (TP) for intra axial brain tumor resection between January 2012 and December 2015. 413 patient charts were reviewed, 16 were omitted due to incomplete records.

Results

421 craniotomies for intra axial brain tumor resection were performed. 397 patients underwent surgery, 35 of whom were <18 years of age.188 females and 209 males. 351 patients (331 adults, 20 pediatric) were admitted to floor beds. In this group, length of operation was <4 hours in 346 patients (99.1%) and >4 hours in only 5 patients (0.9%). 3 patients (0.8%) required transfer to ICU within 24 hours of floor admission. 55 adult patients required ICU stay for various reasons: 9 patients had pre-operative or intra operative EVD placement; 15 patients required prolonged ventilation; 1 patient had to be taken back

to the operating room for hemorrhage evacuation; 5 had intraventricular tumors and were planned ICU admissions; 26 patients were admitted pre-operatively to an ICU bed on a non neurosurgical service and were returning to their assigned beds. In the pediatric population, 15 patients required ICU stay: 8 were for EVD management and 7 for prolonged operation or frequent neurological evaluations. In this group, the length of operation was <4 hours in 40 patients(57.1%) and >4 hours in 30 patients (42.9%).

Conclusions

Admitting adult and pediatric patients to floor beds after craniotomy for intra-axial brain tumor resection is safe. There are some conditions that mandate ICU admission: these include prolonged mechanical ventilation and the presence of an external ventricular drain.

Learning Objectives

By the conclusion of this session, the participants should be able to understand the safety of admitting patients to a regular floor bed after craniotomy for intra axial brain tumor resection.

References

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