

Introduction

Removing the tumor and obtaining a pathological diagnosis are the aim of surgery for intracranial tumors. However, operations are not without inherent risks. Some several complications including large hematoma and malignant brain edema are life-threatening and require the intervention of reoperation.

Methods

Patients undergoing elective surgery for the intracranial tumor at Tangdu Hospital from 2014 to 2017 were included. Complications leading to reoperation were collected and analyzed for patient and tumor characteristics, and early outcomes.

Results

122 patients including 48 males and 74 females received the reoperation for postoperative several complications. The rate of reoperation was less than 1%. Median age was 54.5y (range, 3-84y). Pathological diagnoses included 36 gliomas, 45 meningiomas, 11 pituitary adenomas, 9 schwannomas, 5 craniopharyngiomas, and 16 other tumors. The maximal diameter of tumors ranged from 1.6 to 8.9cm (median 4.1cm). 100 patients obtained total resections, 20 subtotal resections and 2 partial resections. Hematoma (88 cases) was the most frequent complication, followed by brain edema (22), CSF leakage from the wound (9), and wound infection (3). Urgent reoperation was performed from 3.0 to 510.5 hours (median 29.9 h) after primary surgery. Median Glasgow Coma Scale (GCS) score before reoperation and on discharge were 6.5 and 15. Median hospital stay after reoperation was 10 days (range, 1-90d). However, median KPS score representing patient's physical status declined on discharge compared with the score on admission, 40 vs. 80 respectively. Mortality after reoperation was 15.4% (19 patients).

Conclusions

Close monitoring should be performed for finding the complications. Reoperation was the life-saving treatment for these severe complications. The mortality of complications leading to reoperation was high. Pessimistically, physical status still continued to deteriorate after reoperation compared with the status on admission. It's important to weigh the risks of surgery against the presumed advantages.

Learning Objectives

The objective of this study was to summarize the complications leading to reoperation following intracranial tumors surgery.