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## A retrospective cohort-matched comparison of conscious sedation versus general anesthesia for supratentorial glioma resection.

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### Abstract

**Object** Glioma resection under conscious ("awake") sedation (CS) is used for eloquent areas of the brain to minimize postoperative neurological deficits. The objective of this study was to compare the duration of hospital stay, overall hospital cost, perioperative morbidity, and postoperative patient functional status in patients whose gliomas were resected using CS versus general endotracheal anesthesia (GEA). **Methods** Twenty-two cases in 20 patients who underwent surgery for cerebral gliomas under CS and a matched cohort of 22 cases in 19 patients who underwent surgery under GEA over a 3-year period were retrospectively evaluated. Criteria for inclusion in the study were as follows: 1) a single cerebral lesion; 2) gross-total resection as evidenced by postoperative Gd-enhanced MR imaging within 48 hours of surgery; 3) a WHO Grade II, III, or IV glioma; 4) a supratentorial lesion location; 5) a Karnofsky Performance Scale score  $\geq 70$ ; 6) an operation performed by the same neurosurgeon; and 7) an elective procedure. **Results** The average hospital stay was significantly different between the 2 groups: 3.5 days for patients who underwent CS and 4.6 days for those who underwent GEA. This result translated into a significant decrease in the average inpatient cost after intensive care unit (ICU) care for the CS group compared with the GEA group. Other variables were not significantly different. **Conclusions** Patients undergoing glioma resection using CS techniques have a significantly shorter hospital stay with reduced inpatient hospital expenses after postoperative ICU care.

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