

between the two groups (all  $p > 0.05$ ). There was no significant difference in the extent of resection between the groups ( $p = 0.7442$ ). There was no significant difference in complications rates, reoperation rates, and death at 6 months (all  $p > 0.05$ ). Estimated blood loss was significantly higher in the regular hours group ( $p = 0.0278$ ). There was no significant difference in the total operative time ( $p = 0.0643$ ) and length of stay ( $p = 0.0601$ ). Conclusions: After-hours high grade glioma surgery is not associated with increased morbidity or mortality.

## P.087

### Factors affecting health-related quality of life among adult meningioma patients: a systematic review

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**Background:** Meningiomas are common brain neoplasms that can significantly influence health-related quality of life (HRQOL), yet the factors influencing HRQOL in adult patients remain unclear. We aimed to bridge this knowledge gap by determining these key factors. **Methods:** We conducted a systematic review, searching EMBASE, MEDLINE, CINAHL, Scopus, and PsycINFO up to March 2023. We included original, peer-reviewed studies focusing on adult patients (>18 years) with current or past meningioma at any stage of treatment that measured HRQOL or its proxies in relation to tumour-, treatment-, and patient-related factors. Two independent reviewers screened abstracts and full texts, selecting studies with acceptable risk of bias for data extraction and narrative synthesis. **Results:** Of N=2942 identified studies, N=30 were included. Key factors found to influence HRQOL in adult meningioma patients include surgery, radiotherapy, neurological function, functional status, comorbidities, sleep quality, psychological impairment, age, and employment. Factors related to tumour characteristics yielded inconsistent findings. Heterogeneity and inconsistencies in HRQOL measurement across studies hindered definitive conclusions about the impact of factors on HRQOL. **Conclusions:** Our review emphasizes the need for standardized, disease-specific HRQOL assessments in meningioma patients. More consistent, large-scale, prospective research is essential to comprehensively understand and improve HRQOL, and thereby ensure tailored care for this population.

## P.088

### Wounded glioma syndrome: neurologic worsening in patients with subtotal resection in high-grade gliomas

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**Background:** For treatment of high-grade gliomas (HGGs), subtotal resection (STR) may be preferred to minimize injury to eloquent areas. We aimed to characterize neurologic deficits developed in STR patients within the first month post-operatively and to establish a potential threshold for a safe volume of residual tumor to avoid neurological worsening. **Methods:** This is a single

institution retrospective chart review, with 146 charts reviewed and 78 patients deemed eligible. Preoperative deficits and post-operative neurological deficits presenting prior to 1 month after surgery were captured. Imaging features such as tumour volume, edema, and other pertinent imaging characteristics were collected from preoperative and postoperative imaging. **Results:** Most patients that developed a postoperative deficit presented with motor deficits (55.1%), while only 1.3% of patients developed new or worsening tremor after surgery. On average, in patients with a new deficit, 26.5% of tumor was resected, and all patients had more than 19% of residual tumor. **Conclusions:** Postoperative neurologic deficits may develop after a subtotal resection when an average of 73.5% of tumor remains. The proposed threshold for tumor resection is greater than 26.5% to minimize the potential of neurologic worsening 1 month postoperatively.

## P.089

### Volumetric extent of resection and visual outcomes in pituitary adenoma patients presenting with visual compromise undergoing the endoscopic endonasal approach

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**Background:** Reporting extent of resection (EOR) in pituitary adenoma (PA) surgery via endoscopic endonasal approaches (EEA) is not standardized. The use of 3-dimensional volumetric analysis is proposed for measurement of tumor volumes and EOR. Their relationship with visual outcomes is explored. **Methods:** A retrospective analysis of PA patients presenting with visual disturbances and treated surgically via EEA by a single surgeon between 2006 and 2021. The main outcome was visual function at 12 months post-operatively. **Results:** 142 patients were included. Majority were male, with mean age of 57.1 years. Most (58.2%) presented with bitemporal hemianopsia. The mean tumor size was 11.3 cm<sup>3</sup>. The mean EOR was 84.5% (range 21.5-99.8%), with a mean post-operative tumor volume of 1.9 cm<sup>3</sup>. Visual function improved in 92.2%. Re-resection for visual deterioration was performed in 5.7% of patients, (mean time 2.4 years). No clinical, pathologic, or imaging factors were significantly associated with visual outcome. A significant association was found between EOR and re-resection (mean EOR 66.7% vs 85.6%,  $p = 0.002$ ). **Conclusions:** For patients with PA presenting with visual deficits, treatment with EEA led to improvement in visual function in the majority of patients, without the need for gross total resection. EOR was significantly associated with the need for re-resection.

## P.090

### Third ventricular pituitary: case report and review of the literature

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**Background:** Pituitaryoma is a rare, low grade tumour typically of the sellar region. Here we present a pituitaryoma located in the