visual decline and their correlation with the effectiveness of various interventions remain poorly understood. Methods: We retrospectively reviewed data from790 patients who underwent endoscopic endonasal surgery for pituitary adenoma between 2014-2024. We included all the patients who had New Postoperative visual deterioration. Demographic, preoperative, intraoperative, postoperative data were collected and analyzed. Results: Nine patients (1.13%) experienced early postoperative visual deterioration. None of the patient has intraoperative report of direct injury to the optic apparatus, ischemic etiology was seen in five patients. Four patients underwent early reoperation to explore and decompress the optic apparatus. Vision was restored to baseline after reoperation in all 4 compressive cases. In the ischemic group (n=5), three patients improved with supplemental oxygen and hypervolemic-hypertensive therapy (p=0.03). Conclusions: Prognosis and outcome of Postoperative visual deterioration depends on the underlying cause and the effectiveness of intervention. Compressive etiology has a favorable prognosis when identified and managed with reoperation and decompression. Ischemic etiology potentially treatable with supplemental oxygen hypervolemic-hypertensive and high mean arterial pressure in more than half of cases.

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The challenge of Giant Olfactory Groove Meningiomas: long-term outcome and predictive modeling

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Background: Giant olfactory groove meningiomas (OGMs), though rare, pose challenges due to their size. These slow-growing tumors often remain asymptomatic until exceeding 6 cm in diameter. While surgery has advanced, understanding long-term outcomes remains crucial. Methods: This retrospective study at a major medical center included all patients with giant OGMs (>6 cm) undergoing resection from 2000-2022.Data on visual status, recurrence, and functional status were collected. Multivariable logistic regression identified predictors of recurrence and functional outcome. Results: Thirty-two patients met the inclusion criteria for this study, with a mean age of 55.8years.The mean follow-up period was 62months. The majority of giant OGMs were classified as WHO grade 1(84.4%).Postoperatively, 19patients demonstrated improvement in visual acuity and visual field deficits.Radiological recurrence was observed in nine patients(28.1%) at a mean follow-up of 56months, with only three requiring reoperations for tumor resection.One patient developed a brain abscess, necessitating reoperation.Multivariable analysis identified patient age, Simpson grade of excision, and WHO grade as significant predictors of recurrence rate. Conclusions: This study demonstrates that surgery can improve visual deficits and functional outcomes. Postoperative outcomes were strongly predicted by age, resection extent, and histological grade. Developing a new predictive scale based on these parameters appears to strongly predict the Giant OGMs Long-Term outcome.

NEUROCRITICAL CARE

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Early versus late initiation of chemical venous thromboembolism prophylaxis in adult patients with severe traumatic brain injury: a systematic review and meta-analysis

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Background: Patients with severe traumatic brain injury (TBI) are at uniquely high risk of venous thromboembolism (VTE), but the benefits of VTE prophylaxis must be weighed against the risk of intracranial hemorrhage expansion. Current guidelines are heterogenous in their recommendations for chemical VTE prophylaxis (cVTEp) in this high-risk cohort. We conducted a systematic review to identify the optimal timing of cVTEp in severe TBI patients. Methods: We executed a systematic search of the literature to identify adult severe TBI patients treated with cVTEp. Results were pooled, analyzed using random-effects models, and presented as Forest plots and odds ratios. Results: We included 21 studies representing 322,735 patients. The odds of VTE were 0.47 (95% CI: 0.37,0.60) when using the authors' own criteria for early initiation, and the odds of VTE remained significantly *decreased* in subgroup analysis (<24h, <48 and <72h). Early VTEp both as defined by authors and in subgroup analysis *did not* significantly impact the odds of hemorrhage progression or mortality; except for initiation <48h which showed a *positive impact on mortality* (OR: 0.74, 95% CI: 0.63-0.87). Conclusions: This study supports early initiation of cVTEp in reducing the odds of VTE events without significantly increasing the risk of adverse events.

NEUROIMAGING

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Comparison of preoperative diffusion tensor imaging tractography platforms for intrinsic brain lesions

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Background: Diffusion tensor imaging (DTI) tractography enables detailed visualization of white matter tracts (WMT) relevant to surgical planning. Head-to-head performance of clinically available DTI software has not been assessed. We retrospectively compared Synaptive's Modus Plan™(vers. 2.0.1.1743) and Medtronic's StealthViz™(vers. 1.4) software, focusing on workflow, usability, stability, and capacity to generate WMT reconstructions. Methods: Retrospective evaluation of patients (n=13) with intrinsic brain lesions (01/2021-12/2023) with MP and SV software. Corticospinal and optic radiation WMT reconstruction was attempted according to the manufacturers specifications and was rated as clinically useful or not, based on anatomic plausibility. Duration of each analysis step