wellbeing and needs to be addressed in brain tumor patients. Methods: A retrospective study conducted in 2017 in a single academic center that included patients diagnosed with brain tumors in a 10 year period. The assessment of the QoL was done using the European Organization for Research and Treatment of Cancer (EORTC), a standardized model (QLQ-C30) that assess several domains (Global Health, Physical function, Role functioning, Emotional Functioning, Cognitive functioning, social functioning and symptoms domain) and Brain cancer model (BN20) to assess symptoms to evaluate all aspects of wellbeing. Results: The total number of patients included in this study is 76 patients with no gender predilection. The most common brain tumor was meningioma by 40% followed by glioma/ others. More than half of the brain tumor patients had a WHO grade I (65%), intermediate grading grade II (15%) and higher grading grade III/IV (20%). The scales and measurements of functioning in life were low in all types of brain tumors. Conclusions: Quality of life in brain tumor patients seemed poor regardless of the type. Further prospective studies are needed to assess QoL worldwide.

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Pituitary apoplexy: a retrospective single center cohort study

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doi: 10.1017/cjn.2024.229

Background: Pituitary apoplexy is a rare clinical syndrome resulting from infarction or hemorrhage of a pituitary tumor. Here, we present a large single center retrospective cohort study of patients with apoplexy. Methods: Patients with symptomatic apoplexy treated from January 2000 to October 2022 were isolated from the Halifax Neuropituitary Program's database, containing prospectively entered data. Patients treated surgically typically presented with vision deterioration or decreased consciousness. Patient demographics, tumor size, endocrinologic values, and clinical outcomes were analyzed. Results: Eighty-three patients met our inclusion criteria. Seventy-two percent of tumours (n=60) were biochemically non-functioning adenomas. Sixty (72.3%) patients were treated surgically, while twenty-three (27.7%) were treated conservatively. At time of presentation, patients treated surgically had a tumor size in maximum dimension of 2.7±1.4 cm versus 1.6±0.5 cm for those treated conservatively (p=0.0003). There were no significant differences in endocrinological values at time of presentation between groups. Fifteen percent (n=9) of patients treated surgically underwent an additional surgery (mean 2.8±2.0 years from index), of which 67% (n=6) were secondary to tumor recurrence. Conclusions: This is one of the largest reported series of apoplexy with long-term follow up. A subset of surgically treated patients will require additional intervention, highlighting the importance of ongoing follow up in this population.

Other Neurosurgery

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Canadian neurosurgical healthcare spending trends

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doi: 10.1017/cjn.2024.230

Background: Neurosurgical conditions impose a significant burden on the Canadian healthcare system. This study quantifies the economic impact and explores predictive models for postoperative length of stay. Methods: We analyzed data from the Canadian Institute for Health Information National Health Expenditure Trends database for 2015-2019, focusing on case volumes, healthcare costs, and lengths of stay (LOS) across age groups and conditions. Decision tree models were created to predict total LOS from patient age and average acute LOS. Results: There was a modest increase in case volumes from 6,220 ± 3,103 in 2015 to 6,492 ± 3,240 in 2018, with a slight decrease in 2019. The total estimated hospital costs ranged from 2.27 ± 0.38 million CAD in 2015 to 2.23 ± 0.44 million CAD in 2019. The highest costs were seen in the 18-59 age group, at 2.53 ± 0.43 million CAD. Decision tree models showed high accuracy for predicting LOS in cases like spinal injury (F1-score: 0.98) but were less accurate for interventions with trauma or complications (F1-scores from 0.66 to 0.97). Conclusions: The study delineates the financial demands of neurosurgery in Canada and suggests decision tree models as useful tools for predicting hospital stay, with variable accuracy depending on the case complexity.

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Endoscopic fenestration of trapped fourth ventricle

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doi: 10.1017/cjn.2024.231

Background: Trapped fourth ventricle (TFV) is a rare entity that occurs when the fourth ventricle is obstructed and isolated from the normal cerebrospinal fluid (CSF) circulation. While not always symptomatic, TFV can lead to compression of the cerebellum and brainstem, with potential for serious consequences. Treatment of TFV can be challenging, with options including CSF diversion via shunts versus open or endoscopic fenestrations. In this report, we describe a case of TFV that was managed endoscopically. Methods: A seven-year-old girl with a history of myelomeningocele and hydrocephalus, presented with a change in neurological status. Imaging of the brain and spine showed syringomyelia, markedly dilated ventricles, and a TFV. An endoscopic approach was used to fenestrate the wall of the