STR to 10.65 years (95% CI, 6.78–14.52) in GTR. When compared to STR, GTR prolonged progression-free survival by 2.08 years (95% CI, 0.26–3.89; P=0.025). Pooled estimates of seizure control showed an improvement from 47.8% (95% CI, 26.7–69.6) with biopsy to 54.2% (95% CI, 48.7–59.6) with STR to 81.0% (95% CI, 74.6–86.2) with GTR. Compared to STR, GTR delayed malignant transformation (RR, 0.43; 95% CI, 0.20–0.93; P=0.032), without increasing postoperative mortality (RR, 0.38; 95% CI, 0.07–1.97; P=0.250) or morbidity (RR, 1.22; 95% CI, 0.65–2.28; P=0.540). **Conclusions:** Among patients with low grade gliomas, higher degrees of safe EOR, were associated with longer overall and progression-free survival, better seizure control, and delayed malignant transformation, without increased mortality or morbidity.

P.034

Supratentorial lateral ventricle hemangioblastoma in Von Hippel Lindau

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Background: Supratentorial ventricular hemangioblastoma (HB) associated with Von Hippel Lindau (VHL) are extremely rare. Due to their vascularity and location, their management can be difficult. **Methods:** A 35 year old female with VHL, has been followed for 25 years with multiple intracranial and spinal tumours. Surgical removal was carried out on one large cystic and solid posterior fossa lesion. In addition, she underwent adrenalectomy for pheochromocytoma. There were no pancreatic or renal lesions. On serial follow up for years, a left frontal ventricular lesion showed increasing size with clinical signs of increased ICP and marked hydrocephalus, requiring shunting procedures, which were carried out 11 years ago. She has been clinically stable since. **Results:** Hemangioblastomas of the CNS are rare and account for 2% of primary CNS tumours. Supratentorial location is estimated at 4% for sporadic and 13% for HB associated with VHL. The lateral ventricular location is extremely rare. Review of the literature revealed a total of 9 cases of supratentorial ventricular location. The majority of the lesions are associated with VHL and they are solid and vascular lesions. In our cases there was a cystic component. **Conclusions:** If removal is contemplated, angiography with possible preoperative embolization may be required.

P.035

Peritumoral brain edema in meningiomas: correlation with surgical findings and prognosis

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Background: Peritumoral brain edema(PTBE) in meningiomas had been a subject of interest; its occurrence in an extra-axial tumor was the reason of many studies and published data.Our study was made to evaluate the exact implication of Peritumoral brain edema in meningiomas in intraoperative and short postoperative prognosis. **Methods:** During 2006 to 2011,45 patients with supratentorial meningiomas were studied.Intraoperatively,certain findings were reported including: easy or difficult resection,Simpson's grade of removal,brain tumor interface,plane of cleavage, pial vascularization of the tumor and arachnoid disruption.Morbidity and mortality were recorded;also postoperative CT and/or MRI were obtained within the first 3 months. **Results:** There were 26 meningiomas (57.7%) with peritumoral edema and 19 meningiomas without (42.3%).Pial vascularization of the tumor was defined in 24 patients (53.3%),four patients(21%) had a pial blood supply in edema negative group compared to 20 patients (76.9%) in edema positive group. In this study, there was one case mortality (2.2%) in edema positive group.As regard morbidity, eight (30.6%) patients in edema positive group suffered an early postoperative morbidity this is in comparison to four patients(21%) in the edema negative group. **Conclusions:** Our study shows that PTBE in meningiomas affects the surgical prognosis and confers a higher risk of morbidity and postoperative complications. Preoperative management of PTBE and immediate post-operative monitoring are important.

P.036

Securing the nasoseptal flap in endoscopic transsphenoidal surgery: no Foley catheter needed!

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Background: The nasoseptal flap, commonly used in endoscopic transsphenoidal surgical, is typically held in position for several days post-operatively by a nasal Foley catheter balloon. The purpose of this study is to describe our experience with an alternative technique to buttress the nasoseptal flap that renders the use of a Foley catheter unnecessary. **Methods:** A review of our Halifax Neuropituitary Program's database identified patients who underwent endoscopic transsphenoidal surgery for a pituitary macroadenoma with nasoseptal flap, secured with small rolls of Gelfoam™ rather than a nasal Foley catheter. Minimum follow-up clinical and MRI assessments: 3 months. **Results:** 69 patients (mean follow-up: 22 months) met the inclusion criteria: 53 non-functioning and 16 functioning pituitary adenomas. 36 patients had an intraoperative CSF leak: 29 high flow and 7 low flow leaks. 35 patients were repaired by a fat +/- fascia graft. One patient had a post-operative CSF leak repaired by subsequent surgery without the use of a Foley catheter. **Conclusions:** In our experience, 1 of the 69 (1.4%) patients required post-operative CSF leak repair, well within the incidence of 1 to 3% reported in the literature. Securing the nasoseptal flap can be achieved without the use of a nasal Foley catheter.

P.037

Disseminated leptomeningeal hemangioblastoma in a case of Von Hippel Lindau

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Background: Leptomeningeal dissemination of hemangioblastomas (HB), whether sporadic or associated with Von Hippel Lindau (VHL), are extremely rare. Very scanty literature is available. **Methods:** A 36 year old female with VHL and stable pancreatic, adrenal

and renal lesions was operated upon 4 years ago for a large symptomatic cervicomedullary cystic and solid tumor. 2 years after surgery the tumour recurred and further removal was unsuccessful due to medullary adhesions. Radiation was given to the posterior fossa area and to several small nodules over the cauda equina resulting in severe pain. Serial follow up imaging revealed diffuse leptomeningeal dissemination increasing in size of the suprasellar region, ambient cistern and Sylvian fissures. Clinically, she has been stable with small dose of steroids and VP shunt insertion for papilledema. **Results:** Review of the literature consists of 2 series of 7 and 21 patients each with leptomeningeal dissemination involving sporadic HB and VHL associated HB. Leptomeningeal dissemination is estimated at about 4.3%. It is postulated that the tumour starts in the Pia and spreads in an extra medullary fashion throughout the subarachnoid spaces. **Conclusions:** Long term recurrence has been noted raising the question of aggressive treatment with some drug therapy related to angiogenesis is postulated.

P.038

Investigating the role of long non-coding RNAs in glioblastoma multiforme

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Background: Malignant gliomas are the most common and deadly brain tumors. Mean survival rate for a patient diagnosed with a glioblastoma multiforme (GBM) remains slightly over one year. Standard of care consists of treatment with temozolomide (TMZ) and radiotherapy. Recent work has highlighted functions of long non-coding RNAs (lncRNAs) in GBM progression and TMZ response even though the information regarding these newly discovered molecules is sparse. The overarching objective of this project was thus to assess the expression of select lncRNAs in GBM tumor samples and in models of TMZ resistance. **Methods:** A qRT-PCR-based approach was undertaken to measure six lncRNAs in 19 primary GBM samples, four GBM cell lines and in-house developed TMZ-resistant GBM cells. **Results:** Elevated levels of Hotair and H19 were observed in primary GBM tumors while decreased expression of MEG3 was recorded in the same samples. Interestingly, levels of PANDA increased 3.4-fold in GBM cells resistant to TMZ when compared with their sensitive counterparts. **Conclusions:** Overall, this work provides evidence of lncRNA deregulation in GBM tumors and reveals a previously unexplored lncRNA potentially involved in TMZ resistance. Modulation of lncRNA targets via RNAi-mediated approaches is envisioned to clarify their function and to strengthen their position as therapeutic options in GBMs.

P.039

In-hospital endocrinology consultation in post-operative pituitary surgery: is it necessary?

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Background: In-hospital Endocrinology consultation (IHEC) following transsphenoidal surgery is often routine but may be unnecessary, lead to excessive blood testing, and prolong in-hospital stay. Purpose of this study: to determine whether the necessity of IHEC can be predicted by a standardized operative assessment tool. **Methods:** Retrospective review of all transsphenoidal surgeries from January 1, 2016, when we instituted an operative assessment tool to identify patients for which IHEC is required. Minimum follow-up: 3 months. **Results:** 78 patients (42 male; mean age: 57 yrs); the assessment tool identified 17 patients (22%) for IHEC and accurately identified those who would not require IHEC. IHEC patients had longer hospital stay (8.3 vs. 2.9 days), higher rate of new post-operative hormonal deficit (17.6% vs. 0%) and higher 30-day readmission rates (35% vs. 16%). Less than 10% had transient symptoms attributable to steroids; there were no long-term complications from routine post-operative steroid administration. **Conclusions:** Use of our operative assessment tool shows that at least three quarters of pituitary surgery patients can be managed safely without IHEC. Our data indicate that identifying these patients may reduce in-hospital stay and costs with no evidence of compromise of hormone-related care.

P.040

New-onset secondary hormone deficiency in patients with incidental versus clinically manifesting sellar masses

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Background: Secondary hormonal deficiency (SHD) in patients with sellar masses (SM) is associated with significant morbidity. Purpose: to compare long-term risk of new-onset SHD in SM found incidentally (ISM) versus those clinically manifesting (CMSM). **Methods:** From the Halifax Neuropituitary Program's database, we identified all patients having non-functioning and non-pituitary SM from January 1, 2006, with $\geq$ 12 months follow-up. **Results:** There were 214 CMSM (108 with baseline SHD) and 148 ISM (37 with baseline SHD) patients (mean follow-up: 5.7 and 5.0 years, respectively). In patients who underwent early surgery (<90 days from diagnosis), 3-month post-op hormonal function was considered baseline. Despite unchanged tumour size in over 95%, 129 (35.6%) developed new-onset SHD at up to 120 months. The risk of developing new-onset SHD was similar in CMSM and ISM groups (HR = 1.10; CI= 0.69-1.75; p= 0.7), and in surgical and non-surgical patients (HR=1.24; CI= 0.59-2.61; p = 0.58). **Conclusions:** More than one third of patients with non-functioning or non-pituitary SM, presenting either with clinical manifestations or as incidental lesions, will develop new-onset SHD. Furthermore, SHD may develop several years later and despite stability of tumors, highlighting the need for ongoing, long-term hormonal assessment.