

drain between 1997-2012. The primary endpoint was recurrence, defined as occurrence of symptoms due to hematoma confirmed by CT within six months of the original operation. Categorical frequencies were compared with chi square or Fisher's exact test. Logistic regression was performed to identify risk factors for recurrence. *Results:* There were 85 patients (mean age 73 years; SD 13.0) who had burr-hole craniostomy. Age, cSDH volume, site, GCS, anticoagulation, drain, conservative treatment with steroids and perioperative steroids were not found to be independent predictors of recurrence. Recurrence occurred in 2 of 34 (5.9%) patients with drain, and in 7 of 51 (13.7%) without ($p=0.305$). There were insufficient data to compare mortality and complications. *Conclusions:* Use of post-operative subdural drain did not significantly alter the cSDH recurrence rate.

P.077

Factors associated with recurrence after endoscopic transphenoidal surgery for Cushing's disease

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Introduction: Surgical removal is the standard treatment for Cushing's disease. Although endoscopic transsphenoidal surgical (ETS) approach has grown in popularity, its efficacy has not yet been established. Furthermore, achieving long-term remission remains challenging. *Methods:* We conducted a retrospective chart review of 39 consecutive patients who underwent ETS for Cushing's disease at our institution between 2005 and 2014. Univariate analysis using Pearson's χ^2 test was carried out on variables of patient demographics, radiology, pathology, biochemical markers versus recurrence. *Results:* The mean age was 40, with 82% females. Average length of follow-up was 44.8 months. Based on serum cortisol level, 28 patients (71%) achieved mid to long-term remission after ETS. Of them, 25 experienced an immediate remission, and 3 achieved a delayed remission as long as 4 months postoperatively. MRI findings of (1) microadenomas or no detectable abnormality, (2) adjacency to the cavernous sinus wall were associated with significantly higher recurrence rate ($p < 0.05$). Histologically, MIB-1 $>5\%$ was not a significant variable ($p = 0.55$). *Conclusion:* We found ETS resection to be an effective and safe procedure for majority of the ACTH-secreting adenomas, with remission rates $>70\%$. Additionally, patients with microadenomas, negative preoperative MR, and cavernous sinus adjacency were less likely to achieve remission.

P.078

Endoscopic third ventriculostomy (ETV) for treatment of adult hydrocephalus: long-term followup with 163 patients

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Introduction: Treatment of specific patterns of symptomatic hydrocephalus in the adult patient may be accomplished with endoscopic third ventriculostomy (ETV) as an alternative to insertion of a ventriculoperitoneal (VP) shunt. This review examines a single center experience with ETV to treat hydrocephalus in symptomatic adult patients. *Methods:* Adult patients (≥ 18 years) with a diagnosis of

hydrocephalus who were treated with ETV in Calgary between January 1994 and July 2014 were reviewed using a clinic database and registry. *Results:* 163 patients were identified (male=92; female=71). Mean age at the time of ETV was 46.5 years (range 18-83.4 years). 118 underwent ETV as a primary treatment and 45 patients underwent treatment after presenting with VP shunt failure (secondary ETV). 113/163 patients had a diagnosis of aqueductal stenosis, 22/163 had a diagnosis of tumor. Mean followup was 8.2 years (range 0.3-18.4 years). Symptoms in 149/163 (91.4%) of ETV patients were better or unchanged at last followup. 104/118 (88.1%) of primary ETV patients were shunt free at last followup. 39/45 (86.7%) of secondary ETV patients were shunt free at last followup. *Conclusion:* Endoscopic (ETV) treatment is an effective long-term treatment for a select population of adult patients with hydrocephalus.

P.080

Classification of facial pain: a 13-year population-based study

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Introduction: Accurate diagnosis and classification of facial pain is critical for assigning surgical treatment, avoiding misdirected interventions and studying outcomes. We conducted a population-based longitudinal study of patients with facial pain and compared diagnostic classification systems. *Methods:* Medical records for all Manitobans presenting to our centre with a primary complaint of facial pain from 2001 to 2013 were reviewed. We then applied diagnostic criteria from the International Classification of Headache Disorders (IHS-3), the International Association for the Study of Pain (IASP) and Burchiel's system for comparisons. *Results:* There were 534 patients with facial pain (3.4/100,000/year) and two-thirds of these had conditions potentially amenable to neurosurgical interventions. Our most common diagnoses were *typical trigeminal neuralgia*(50%), *atypical trigeminal neuralgia*(7%), *idiopathic trigeminal neuropathy*(7%), *idiopathic facial pain*(11%); average ages were $65\pm 14(22-99)$, $60\pm 18(32-86)$, $55\pm 16(28-83)$ and $48\pm 12(28-82)$ with a female proportion of 55%, 59%, 65% and 80%, respectively. Other classification systems included no criteria for *idiopathic trigeminal neuropathy*. The classifications of "*trigeminal neuralgia type-1 and type-2*" did not differentiate between surgical and non-surgical candidates. *Conclusion:* Published classification systems of facial pain have differing criteria for diagnosis of trigeminal neuralgia and none defines a large group with *idiopathic trigeminal neuropathy*. This may lead to considerable variability in determinations of potential surgical candidates and comparing outcomes of treatment.