

treating neurosurgeon. *Results:* In 46 patients, cognitive symptoms were present in 52%, 91% had somatic, and 100% had emotional symptoms. Fatigue was the most common symptom (67%). Double vision was the least common symptom (4%). Recommendations for managing symptoms, return to work, and need for formal clinical assessment were provided for 37% of cases. *Conclusions:* All patients admitted to neurosurgery with mild or moderate TBI had symptoms at two weeks. The RPCQ is a low-cost structured evaluative tool which highlights needs and provides guidance for patients and caregivers; it also seems effective in identifying those who may require formal clinical assessment.

## P.017

### Efficacy of stereotactic intracavitary instillation of <sup>90</sup>yttrium colloid for treatment of cystic sellar/parasellar tumors

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doi: 10.1017/cjn.2017.102

*Background:* Traditional neurosurgical techniques and/or stereotactic radiotherapy, although effective for solid tumors, can be associated with high morbidity and be relatively ineffective for long-term control of cystic sellar/parasellar tumors. The rationale of our study was to examine the efficacy and safety of stereotactic intracavitary instillation of <sup>90</sup>yttrium colloid for the primary treatment of cystic tumors. *Methods:* As part of a Health Canada approved clinical trial, we have enrolled nine patients (6 females, 3 males; mean age 64, range 43 to 83 years) for treatment of symptomatic and/or enlarging cysts. Ten cystic sellar/parasellar lesions underwent right frontal stereotactic insertion of <sup>90</sup>yttrium colloid to deliver a radiation dose of 200 Gy to the cyst wall. *Results:* Compared with pre-treatment cyst volumes (mean 4.6 cc; range 0.8-16.1 cc), the cysts decreased in size at 3 months (2.6 cc; 0.2-10 cc) with further shrinkage (n=5) at 9 months (1 cc; 0.1-2.7 cc). Of 9 patients with pre-operation visual field defects, 6 showed improvement. The single complication was a delayed (1 month) incomplete CNIII palsy. *Conclusions:* Our early experience indicates that <sup>90</sup>yttrium colloid delivered to a cystic craniopharyngioma provides an efficacious alternative to open surgery for primary treatment of these cystic lesions.

## P.018

### Minimally invasive endoscopic evacuation of intraparenchymal hematomas, a single centre experience

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doi: 10.1017/cjn.2017.103

*Background:* Patients with spontaneous intracerebral hemorrhage (ICH) suffer significant morbidity and mortality with lengthy critical care and hospital stays. Minimally invasive techniques for ICH removal have shown a positive relationship between hemorrhage volume reduction and patient outcome. We describe our single centre experience with endoscopic assisted, neuronavigation guided ICH evacuation using the Apollo system. *Methods:* Patients with ICH treated with the Apollo system since October 2014 were included in this retrospective review. ICH volume, clot reduction, midline shift, ICU and hospital length of stay, discharge disposition and last known

functional outcome were assessed. *Results:* 58 patients were treated, mean age 54.1 years. Starting clot volume was 55.1±30.5cc, which was reduced to 10.2±12cc post-operatively, an average reduction of 80.6±25%. Midline shift improved from 7.1±4.5mm to 4.4±3.2mm. Length of ICU stay was 10.2±7.6 days. Covariate analysis showed greater relative reduction in ICH volume correlated with shorter ICU stay (p=0.01). In-hospital mortality was 27.3%; 29.1% of patients were discharged home either form hospital directly, or after a period of short-stay rehab. *Conclusions:* Significant hematoma volume reduction and improvement in midline shift is possible with the Apollo system. Degree of reduction of hematoma volume was associated with a shorter ICU Stay. Randomized controlled studies will be required to determine long term clinical benefit.

## P.019

### Report from the Canadian Neurosurgery Research Collaborative – One year of resident-led multicentre research initiatives

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doi: 10.1017/cjn.2017.104

*Background:* The Canadian Neurosurgery Research Collaborative (CNRC) was founded in November 2015 as a resident-led national network for multicentre research. We present an annual report of our activities. *Methods:* CNRC meetings and publications were reviewed and summarized. The status of ongoing and future studies was collected from project leaders. *Results:* In its first year, the CNRC produced two papers accepted for publication in the Canadian Journal of Neurological Sciences: A CNRC launch letter and a study of operative volume at Canadian neurosurgery residency programs. Three manuscripts are in preparation: 1) a study of the demographics of Canadian neurosurgery residents, 2) an assessment of mobile devices usage patterns and 3) a validation study of the most utilized neurosurgery mobile apps. In addition, protocols for two multi-centre studies are currently undergoing national Research Ethics Board review: A retrospective study of the incidence and predictors of cerebellar mutism and a prospective registry of external ventricular drain procedures and complications. The network is now a registered not-for-profit organization endorsed by the Canadian Neurosurgical Society. *Conclusions:* The CNRC is a feasible, relevant and productive resident-led national research network. As the CNRC matures, we look forward to expanding the scope and impact of its projects.

## P.020

### A novel scale for describing visual outcomes in patients following resection of lesions affecting the optic apparatus – Unified Visual Function Scale

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doi: 10.1017/cjn.2017.105

*Background:* Historically, description of patient visual acuity and visual field changes following intracranial procedures has been very rudimentary. Clinicians and researchers have relied on the use of