

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

DB Clarke (Halifax)\* AL Hebb (Halifax) R Hill (Halifax) SA Imran (Halifax) A Mishra (Halifax) G Mawko (Halifax) S Burrell (Halifax)

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

NP Deis (Fresno)\* R Ryan (Fresno) A Pham (Fresno)

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

C Iorio-Morin (Sherbrooke)\* M Kameda-Smith (Hamilton) SU Ahmed (Saskatoon) M Bigder (Winnipeg) A Dakson (Halifax) C Elliott (Edmonton) D Guha (Toronto) P Lavergne (Québec) S Makarenko (Vancouver) M Taccone (Ottawa) M Tso (Calgary) B Wang (London) A Winkler-Schwartz (Montréal)

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

S Makarenko (Vancouver)\* V Ye (Vancouver) R Akagami (Vancouver)

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

vague descriptions like “improved”, “worsened”, and “unchanged” to describe outcomes following resections of tumours affecting the optic apparatus, which are difficult to quantify in a clinical setting. *Methods:* We present a novel way to describe a patient’s visual function as a combination of visual acuity and visual field assessment that is simple to use and can be used by surgeons, and researchers to gauge visual outcomes following tumour resection. *Results:* With our scale we were able to capture the overall visual change while being sensitive enough to define the overall quantity of improvement or worsening quantitatively, using categories that are clinically relevant and understandable. *Conclusions:* The implementation of pre- and post-operative assessment provides clinically relevant information for surgeons and is robust for routine use.

Visual Fields	Visual Acuity		
	20/20 – 20/50	20/50 – 20/200	< 20/200
> 120° along horizontal axis and > 15° above and below level of fixation	A	B	C
< 120° along horizontal axis or < 15° above and below level of fixation > 20°	B	B	C
< 20°	C	C	C

## P.021

### Surgical management of incidentally discovered diffusely infiltrating glioma

*M Opoku-Darko (Calgary) S Lang (Calgary) J Kelly (Calgary) M Cadieux (Calgary)\**

doi: 10.1017/cjn.2017.106

*Background:* Occasionally low grade gliomas (LGGs) are identified incidentally while asymptomatic. The diagnosis of incidental LGGs has become more frequent due to increase in access to medical imaging. While management of these lesions remains controversial, early surgery has been suggested to improve outcome. *Methods:* All LGGs treated between 2004 and 2016 at our institution were reviewed. Patients with incidentally discovered glioma were identified and retrospectively reviewed. “Incidental” was defined as an abnormality on imaging that was obtained for a reason not attributable to the glioma. Outcomes were measured by overall survival, progression free survival and malignant progression free survival. *Results:* Thirty-four out of 501 adult patients who were treated for low grade glioma were discovered incidentally. Headache (26%, n=9) and screening (21%, n=7) were the most common indications for brain imaging. The mean duration follow up was 5 years. Twelve patients had disease progression, 5 cases of malignant progression and 4 deaths. Oligodendroglioma was diagnosed in 16 and astrocytoma in 15 patients. Twenty-five (74%) patients had IDH1 mutation and demonstrated prolonged survival. *Conclusions:* This retrospective cohort of incidentally discovered LGGs were surgically removed with minimal surgical risk. There is improved overall survival likely attributable to the underlying favorable biology of the disease indicated by the presence of IDH1 mutation.

## P.024

### An atypical presentation of neurocysticercosis: a Manitoban case

*PA Szelemej (Winnipeg) E Wiens (Winnipeg) J Silvaggio (Winnipeg) M Bigder (Winnipeg)\**

doi: 10.1017/cjn.2017.109

*Background:* Neurocysticercosis is the world’s leading cause of epilepsy and the most common helminthic disease affecting the human nervous system. It is relatively rarely seen in developed nations, and usually presents clinically with seizures. *Methods:* This case report was prepared using the patient’s hospital chart, and a review of the literature was undertaken using PubMed. This case was subsequently compared and contrasted to the known neurocysticercosis literature. *Results:* This is the case of an otherwise healthy 38 year old Nepalese female who presented with a history of headaches. Nonspecific in nature, they had worsened in the past couple of weeks, thus prompting appropriate imaging of the head. A large 4 cm ring enhancing lesion with edema and mass effect was discovered in the right anterior temporal lobe. No other neurological findings were found on exam. Pathological analysis confirmed a larval scolex of *T. solium*. *Conclusions:* Aside from being an unusual pathology to be seen in Manitoba, this case is unique in both its clinical and radiographic presentations. There were no seizures noted on presentation, and a significant amount of mass effect was seen around a large lesion, all unusual features for neurocysticercosis.

## GENERAL PEDIATRIC NEUROLOGY

## P.025

### Magnetic resonance imaging in pediatric recurrent ophthalmoplegic cranial neuropathy

*A Alawadhi (Montreal)\* C Saint-Martin (Montreal) M Oskoui (Montreal)*

doi: 10.1017/cjn.2017.110

*Background:* Recurrent ophthalmoplegic cranial neuropathy (ROCN), previously called ophthalmoplegic migraine, is characterized by recurrent episodes of headache and ophthalmoplegia of unclear etiology. Characteristic neuroimaging findings can support the diagnosis. *Methods:* A case report and review of the literature. *Results:* We present a 6-year-old girl with a past history of migraine headaches associated with retroorbital pain since 4 years of age. Family history is positive for migraine. She presented with a half a day history of left eye ptosis, 10 days post a resolved gastroenteritis which was associated with headaches. Examination showed only a left eye ptosis, pupil-sparing with no exotropia or diplopia. There was no headache. The rest of the neurologic examination was normal. Investigations showed normal blood tests and lumbar puncture. MRI head showed on thin cuts asymmetric nodular thickening (4mm) of the origin of the cisternal segment of the left oculomotor nerve, with corresponding homogeneous enhancement post gadolinium infusion. Clinical resolution occurred spontaneously within 48 hours. A review of the literature highlights focal thickening and enhancement of the affected cranial nerve, with resolution of enhancement post-acute