

28 patients over the study period (43.3 +/- 17.3 years; 64.3% male). Indications for placement included acute lymphoblastic leukemia, diffuse large B-cell lymphoma, and leptomeningeal carcinomatosis. There was one asymptomatic peri-operative intracranial hemorrhage (3.6%), and one early infection (3.6%). All catheters were well-positioned and functional. *Conclusions:* In our retrospective single-centre case series, all catheters were placed accurately. Our results support routine use of intra-operative image guidance for proximal catheter insertion in elective Ommaya reservoir placement for intraventricular chemotherapy.

## P.093

### **Pulsatile tinnitus due to obstruction of transverse sinus by tentorial meningioma**

*FB Maroun (St. John's)\* R Avery (St. John's) B Lee (St. John's) P Bartlett (St. John's) N Hache (St. John's)*

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*Background:* The etiology and treatment of pulsatile tinnitus is difficult and there are different causes for it. To our knowledge, an obstruction of the transverse sinus due to tentorial meningioma has not been reported. *Methods:* A 66 year old female presented a year ago with a sudden onset of a hissing sound in her ear which has persisted since. Neurologically she was intact. She was seen by otolaryngology who identified no cause for her tinnitus. A CT scan and MRI showed a tentorial meningioma on the right side with partial obstruction of the transverse sinus with evidence of partial chronic thrombus. *Results:* Removal of the meningioma with decompression of the transverse sinus resulted in immediate disappearance of the pulsatile tinnitus. *Conclusions:* This report can be added to the etiology of the difficult entity of pulsatile tinnitus particularly as it relates to its management.

## P.094

### **Modified Obwegeser temporal approach to the infratemporal fossa: four cases and review of literature**

*BH Wang (London)\* R Woodford (London) J Armstrong (London) SP Lownie (London)*

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*Background:* The infratemporal fossa is an anatomically complex region. Lesions that arise in the infratemporal fossa are uncommon; however, their surgical resection remain challenging. Here we present a modified preauricular subtemporal approach initially described by Obwegeser et al. used in four patients with large skull base lesions. *Methods:* Retrospective case series of 4 patients *Results:* Four patients with various lesions of the infratemporal fossa (aneurysmal bone cyst, giant cell tumor of the bone, recurrent melanoma and recurrent clival chordoma) underwent surgical resection using the modified Obwegeser approach. A multidisciplinary team cared for patients consisting of maxillofacial surgery, otolaryngology and neurosurgery. After either nasotracheal intubation or tracheostomy, the patient's jaw was temporarily wired shut. A curvilinear incision was fashioned and the root of zygoma was exposed (masseter attached) and osteotomized followed by inferior mobilization. The mandibular condyle is osteotomized next and TMJ disarticulated with temporalis muscle still attached and reflected superiorly. Surgical resection

of tumor then proceeded centered around the region bridging the temporal and infratemporal fossae. Reconstruction was carried out using plates and screws. *Conclusions:* The modified Obwegeser approach can provide safe and direct access to certain infratemporal fossa lesions with good cosmesis and functional outcome for patients without substantially increasing OR time.

## NEURO INTERVENTIONAL

## P.095

### **Clinical outcomes following carotid angioplasty and stenting in patients over age of 75: Careful patient selection overcoming the age-effect**

*N Alizadeh Vakili (Toronto)\* B Drake (Toronto)\* A Bharatha (Toronto) A Chiu (Toronto) T Marotta (Toronto) W Montanera (Toronto) D Sarma (Toronto) J Spears (Toronto)*

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*Background:* CAS is reported to have higher complication rates in elderly compared to younger patients. This effect may be a surrogate for unfavourable anatomy (tortuosity, arch/access vessel atheroma burden) for endovascular treatment. We report our experience with 42 highly selected patients with favourable anatomy in spite of age. *Methods:* From a cohort of 217 consecutive patients undergoing CAS at St Michael's Hospital from 2010-2016, stroke and a composite outcome of stroke, MI or death at 30 days post procedure was recorded. We compared outcomes in patients below and above the age of 75. *Results:* In 217 patients, 175 (80.7%) were below and 42 (19.3%) were above age 75 years. The stroke rate was 1.7% (n=3) and 2.4% (n=1), for patients below and above age 75 years respectively (p=0.58). The composite outcome rate was 4.0% (n=7) and 4.8% (n=2) for patients below and above age 75 years respectively (p=0.69). *Conclusions:* Patients without high-risk anatomic features were selected for CAS treatment. In this selected group, outcomes for those older than 75 years are comparable to the younger age category. Complication rates were comparable to the results in major randomized symptomatic carotid trials.

## P.096

### **A single institution experience with 217 average risk patients undergoing carotid angioplasty and stenting in the post CREST era, a real life experience**

*B Drake (Toronto)\* N Alizadeh Vakili (Toronto) D Sarma (Toronto) A Bharatha (Toronto) T Marotta (Toronto) W Montanera (Toronto) A Chiu (Toronto) J Spears (Toronto)\**

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*Background:* The CREST trial remains the most influential study regarding choice of treatment modality for carotid revascularization in the modern era. The effect of the CREST trial on patient outcomes and changes to clinical practice are yet to be fully elucidated. *Methods:* We report a cohort of 217 consecutive symptomatic average risk patients undergoing CAS at St. Michael's Hospital, between 2010 and 2016. Outcome measures were stroke, MI and death at 30 days post procedure. Of the 217 patients, 42 were above the

age of 75 (19%). *Results:* The 30-day combined stroke, MI and death outcome for all patients was 4.1%. One death occurred (0.46%) in a patient who suffered an MI. One disabling stroke (0.46%) and 3 mild strokes (1.38%) with full recovery by 6 months occurred. Overall 4 patients suffered an MI (1.84%). *Conclusions:* As a result of the CREST trial in our single institutional experience there has been a clear migration to treating average risk patients using CAS, a treatment previously reserved for high risk patients. In this average risk cohort we report favourable outcomes when compared to the CREST trial as well as the firmly established benchmarks for CEA complications derived from the NASCET trial.

## P.097

### Safety of intrarterial reopro in thrombotic complications during coiling

R Martinez-Perez (London)\* M Boulton (London), M Sharma (London)

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*Background:* Abciximab is used for the treatment of thromboembolism occurring during endovascular procedures, however the experience with intra-arterial infusion is limited. The objective is to evaluate its safety and effectiveness during coiling complications. *Methods:* From an aneurysm coiling database, patients treated with intra-arterial abciximab due to thrombotic complications were selected. Patient were classified either as non-ruptured aneurysm for elective coiling or presenting with subarachnoid hemorrhage. They all had pre and post-procedure cerebral angiography performed at our institution as part of routine work-up. Success rate was based on recanalization seen on cerebral angiography. Complications of using abciximab were reported. *Results:* 35 of 441 coiling patients had a thrombotic complication. 13 of them were treated using intra-arterial infusion of abciximab. 2 patients were male, median age 59. 6 patients presented with sub-arachnoid haemorrhage. 84 % of patients had at least partial recanalization, while 38 % experienced complete recanalization of the parent vessel. 45 % of patients had complications, none severe. 2 patients had aneurysm recanalization, 3 distal migration of thrombus and 1 had haemorrhage (non ruptured aneurysm). *Conclusions:* In spite of being considered a safer alternative, use of intrarterial abciximab has potential risks, including hemorrhage, distal thromboembolism and aneurysm recanalization.

## P.098

### Arterial wall and plaque remodeling after stent deployment in carotid stenosis: ultrasonographic study

R Martinez-Perez (London)\* G Marchuk (London) D Lee (London) D Pelz (London) S Lownie (London)

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*Background:* We evaluated the effects of stents on carotid plaque and the arterial wall using carotid ultrasound in carotid stenting patients *Methods:* From a carotid stent database, 30 consecutive patients were selected. All had Doppler ultrasound performed pre and post-stenting. The diameters of the lumen at the level of stenotic plaque pre and post stenting, the dorsal and ventral plaque thickness, and of the outer arterial wall diameter were measured. Plaque thickness was measured at the level of maximal stenosis. Non parametric

tests were used to determine whether the stent effect and luminal enlargement were based on wall remodeling or on total arterial expansion. *Results:* Patient was followed for an average of 22 months. 18 patients were male, average age 70 years. 87% were symptomatic ipsilateral to the side of stenosis. The luminal diameter increased post stenting in the region of severe stenosis. Plaque thickness, both ventrally, as well as dorsally decreased post stenting, with no significant difference between the ventral and dorsal plaque effects. The measured lumen in the stent increased over time post-stenting. *Conclusions:* Self-expanding nitinol stents alter the baseline ventral and dorsal plaque to a significant degree, and do not significantly affect the native arterial wall and the overall arterial diameter .

## P.099

### Characteristics of the SOFIA distal access catheter in suction-stentriever acute stroke intervention

E Spinos (Richmond) TK Mattingly (Richmond)\*

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*Background:* Tri-axial systems are frequently employed in stroke interventions. In addition to more support, the distal access catheter can provide suction aspiration during a stent retrieval. We have recently adopted the 5F SOFIA as part of a tri-axial system for acute stroke interventions, and believe it has improved efficient recanalization. *Methods:* This is a retrospective case series of acute stroke interventions utilizing the 5 F SOFIA 125 cm distal access catheter. Cases were evaluated for distal location of the catheter, number of stent-tri-axial passes, and final TIC1 score. We describe our angiographic technique. *Results:* Nine acute stroke cases were performed using the SOFIA catheter. LVOs were in the M1(6), M2 (2), distal basilar (1). The 5F SOFIA catheter was advanced into the M1 or Basilar artery in all cases. No dissections or spasm was seen in the catheterized intracranial artery. Mean stent-tri-axial passes was 2 (1-4). Final angiographic results were TIC1 3 (6), TIC1 2b (2), and TIC1 0 (1). *Conclusions:* Efficient thrombectomy is a key part of successful stroke recanalization. We report on our experience with a specific distal access catheter which has reduced the number of stent passes required to restore flow.

## P.100

### Carotid stent fracture post balloon angioplasty for unilateral recurrent ICA stenosis with pre-existing occlusion of contralateral ICA and literature review

AH Naeem (London)\* G Alrumaihi (London) M Boulton (London)

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*Background:* Closed cell carotid stent fracture is rare. From our literature review, we present the first reported case in English literature of a carotid stent fracture post angioplasty for an in-stent stenosis. *Methods:* Case Report *Results:* 72-year-old male underwent left carotid stenting for symptomatic ulcerated stenosis of the proximal aspect of left ICA (71% stenosis with post-stenting 55% residual stenosis). His right ICA and right vertebral artery were occluded. 2 months later, he presented with TIA's and severe in-stent stenosis in the proximal left ICA measuring 1 mm in diameter. Satisfactory balloon (5 x 40 mm) angioplasty was done with residual stenosis measuring 2.5 mm in diameter. 8 months later he presented