on CTA can reliably exclude aneurysms in patients with acute SAH. *Materials and Method:* We conducted a retrospective analysis of all DSA performed from August 2010 to July 2014 in patients with various indications. We selected patient who presented with SAH and had a negative CTA. Findings of the CTA were compared with DSA. *Results:* 857 DSA were performed during the study period. 51(5.95%) patients with SAH and negative findings on CTA who underwent subsequent DSA were identified. Of these, only 3(5.9%) of patients had positive findings on the DSA. One patient had a posterior inferior cerebellar artery aneurysm on the DSA, not seen on CTA due to the incomplete coverage of the head. Second patient' CTA did not show any evidence of aneurysm. DSA showed suspicious dissection of the right vertebral artery, potentially iatrogenic. The third patient's DSA showed suspicious tiny protuberance from left ICA, possibly infundibulum. *Conclusion:* In patients with SAH, negative CTA findings are reliable in ruling out aneurysms in any pattern of SAH on CT.

P.090

Carotid artery occlusion secondary to retropharyngeal abscess treated with endovascular carotid sacrifice

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Introduction: Carotid occlusion is a rare but serious complication of retropharyngeal abscess (RPA). Management questions that must be addressed include the choice between reconstruction and occlusion in the setting of an active infectious process. *Case Report:* A 4 year old female presented with hoarseness, shortness of breath, and a right-sided Horner's syndrome. A CT scan confirmed the diagnosis of RPA, and contrast studies showed no filling in the right internal carotid artery (ICA). Surgical exploration of the abscess disrupted the occluded artery, causing deep, uncontrolled bleeding. Emergent angiographic evaluation was completed, and the decision was made to sacrifice the ICA. The patient recovered on antibiotics, but the Horner's syndrome persisted. **Discussion:** The presence of a carotid artery occlusion must be ruled out in the setting of a RPA. When suspected, it should be investigated further. Therapeutic decisions regarding sacrifice or reconstruction of the carotid artery are burdened by risks associated with the setting of an infection, notably infection and systemic dissemination. *Conclusion:* The presence of a carotid occlusion is a serious complication resulting from a RPA that can lead to permanent neurological deficit. Endovascular vessel sacrifice is a viable treatment option for carotid occlusion in the setting of a retropharyngeal abscess, but must be considered on a case-by-case basis.

Neurosurgery (Neuro Oncology)

P.091

Factors associated with improved RCT impact and quality in neuro-oncology

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Background: Deficiencies in design and reporting of randomized controlled trials (RCTs) limit their validity. The quality of recent RCTs in neuro-oncology was analyzed to assess adequacy of design and reporting. *Methods:* The MEDLINE and EMBASE databases were searched to identify non-surgical RCTs (years 2000-2010). The CONSORT and Jadad scales were used to assess the quality of design/reporting. A PRECIS-based scale was used to designate studies on the pragmatic-explanatory continuum. Spearman's test was used to assess correlations. Regression analysis was used to assess associations. *Results:* Overall, 44 RCTs were identified; majority (23 studies) were chemotherapy-based. High grade gliomas (43%) and metastases (41%) were top pathologies. The majority of studies were multi-center (70%), ITT (61%), and did not collaborate with biostatisticians (70%). Half of the studies were funded by industry (50%). The median CONSORT and Jadad scores were similar in radiation and chemotherapy-based trials (34 and 35 vs 3 and 2, respectively). The impact factor was significantly associated with higher quality ($p<0.01$). Multi-center trials were more likely to result in positive outcomes ($p = 0.02$). *Conclusion:* Deficiencies in the quality of design and reporting of RCTs in neuro-oncology persist. Quality improvement is necessary. In parallel, alternative strategies may be required.

P.092

Midline skull tumors

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Introduction: Variety of tumors could involve the skull; however, very few may occur over the midline. Some may affect venous blood flow of superior sagittal sinus. Few challenging cases are presented *Material:* 1-Rare case of osteoblastoma over the torcula, (headache, visual symptoms, papilledema, VI nerve palsy). 2- Rare case of metastatic liposarcoma involving midsagital sinus, partially occluding it (headache and visual blurring). 3- A huge atypical (grade2) meningioma over the vertex *Method:* Case #1, the tumor over the venous confluences (torcula) was removed easily, without any complications. Complete resolution of symptoms Case #2, complete en-block resection of tumor, with sacrifice of mid-sagittal portion of sinus, without any neurological sequellae. Case #3, subtotal resection, followed by radiotherapy.

Discussion & *Conclusion:* Anterior 3rd of sagital sinus could be sacrificed (if necessary), without major consequences. However, whenever mid or posterior portion of the sinus is involved, interruption of venous flow could pose very serious complications. Occasionally, chronic compression of sinus may force increasing collateral

venous return, in which case one may attempt a complete resection of the lesion, with sacrifice of part of the sinus, as in our second case. In the region of torcula, however, one should be very careful not to damage it

P.093

Case report of a serous endometrial carcinoma metastasizing to the brain

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Background: Endometrial carcinoma (EC) is a rare cause of central nervous system metastases, with only 115 cases reported in the literature. There have only been 4 cases reported in the literature for the serous carcinoma subtype. This case study describes a new case of serous carcinoma metastasizing to the brain and demonstrates some of the potential characteristics of this subset. *Case:* A 77 year old female presented to the emergency department with a 2 week history of progressive left sided weakness and speech difficulties, and a known history of EC diagnosed approximately 3 years earlier. Imaging showed a right temporoparietal tumour. She underwent debulking of this tumour and was found to have a metastasis from her previously known serous carcinoma. *Results:* In comparing the serous subtype to the 115 known cases, many characteristics show similar patterns to EC as a whole; there could be a predominance to infratentorial lesions with the serous subtype, as 2/4 known metastases were cerebellar compared to only 25% of all endometrial carcinomas. *Conclusions:* There are possibly different characteristics of metastasizing of various EC subtypes. Before any conclusions can be drawn about the characteristics of any subtype, more data needs to be available for accurate interpretation.

P.094

Hemangiopericytoma from meningioma - is diffusion weighted imaging useful in their differentiation?

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Purpose: Hemangiopericytoma and Meningioma appear similar on routine diagnostic imaging. Diffusion weighted images (DWI) has been used to characterize different types of tumors. The purpose of this study was to assess whether DWI can be used to differentiate hemangiopericytoma from meningioma on diagnostic imaging. *Materials and Methods:* In a retrospective study, our tumor database was analyzed for diagnosis of hemangiopericytoma with DWI available at the time of diagnostic imaging. These patients were then matched based on location and size of the tumor in a ratio of 1 hemangiopericytoma vs. 2 matched meningioma. The minimum and mean Apparent Diffusion Coefficient (ADC) was measured in the tumor and the contralateral Normal Appearing White Matter (NAWM) to calculate a normalized ADC (nADC) as the ratio of the two. The two tumors were also subjectively assessed for their heterogeneity. *Results:* Seven patients with histopathological diagnosis of hemangiopericytoma were matched based on size and location with 14 patients of meningioma. Primary meningioma were significantly homogeneous ($p<0.001$) in appearance compared to hemangiopericytomas. Hemangiopericytomas had a higher mean ADC compared to that of meningioma ($p<0.001$). *Conclusion:* Hemangiopericytoma showed heterogeneity on DWI and significantly higher ADC compared to that of meningiomas in our small study. This needs to be confirmed in a study with a larger sample size.

P.095

Natural history of the anterior visual pathway after surgical decompression in patients with pituitary tumors

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Introduction: Visual dysfunction is one of the primary indications for surgical management of pituitary tumors with the goal of terminating the progressive decline in vision. Unfortunately, it is difficult to predict how successful surgical decompression will be in these patients. The purpose of this study was to assess the structural changes seen in the anterior visual pathway after pituitary tumor resection. *Methods:* 13 patients (7F) underwent endoscopic tumor resection for pituitary macroadenoma. Each patient underwent a full ophthalmologic assessment including optical coherence tomography (OCT) preoperatively and postoperatively at 3-6months and 9-12months. Post-surgical changes in the retinal nerve fiber layer thickness (RNFLT) for each eye (N=26) were compared in cases with normal preoperative RNFLT (greater than 80μm) versus those with abnormally thinned RNFLT (less than 80μm). *Results:* For 9 cases with thinned RNFLT preoperatively (mean=70.1μm±8.5), there was a significant decline in RNFLT at 3-6 months follow-up (mean change= -3.8μm;$p=0.002$), which did not recover even at 9-12months after surgery (mean=67.6μm±12.7). Contrastingly, eyes with normal RNFLT preoperatively (mean=89.7μm±9.4) did not show significant postoperative thinning (mean change= -1.9μm). *Conclusion:* Even after a complete surgical decompression, there are ongoing structural changes in the anterior visual pathway in patients with compressive neuropathy. There may be a point of no return where surgical decompression may not prevent further structural degeneration.

P.096

Familial pineal tumours in two siblings

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Background: The occurrence of familial brain tumours, particularly gliomas, hemangioblastomas in Von Hippel Lindau and other endocrine neoplasia, is well documented in the literature. On the other hand, familial pineal tumours are extremely rare and only a handful of cases have been reported. *Methods and Results:* Two female siblings presented at ages 12 and 15 with histories of progressive headaches. Neurological examination in each was completely normal. Magnetic Resonance Imaging confirmed the presence of cystic and solid lobulated pineal lesions with mild enhancement, consistent with pineocytoma, in both girls. Follow-up for 15 years in the first sibling and 4 years in the second showed no evolution in radiological or clinical manifestations. No active treatments have been carried out. *Conclusion:* The occurrence of familial pineal lesions raises the possibility of a close relationship between heredity and oncogenicity, and should be further explored.