

Conclusion Our study highlights the considerable heterogeneity among the neurointerventional community regarding vasospasm diagnosis and endovascular management. Randomized trials and guidelines are needed to improve standard of care, determine optimal management approaches and track.

Disclosure of Interest Dr Guenego reports consultancy for Rapid Medical and Phenox

P108/262 SURGICAL MANAGEMENT OF SPONTANEOUS INTRACEREBRAL HEMATOMA IN A PATIENT WITH HEMOPHILIA C(XI FACTOR DEFICIENCY)

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Introduction Hemophilia C (HC) is a rare, inherited bleeding disorder when the blood does not clot properly. In patient with Hemophilia C there is deficiency of factor XI. Spontaneous intracerebral hemorrhage is a rare and challenging condition to treat, especially in hemophiliacs.

Aim of Study To study the surgical result of patient with Hemophilia C.

Methods A 28-year-old man, was taken to our hospital with sudden onset of headache. Complaints were available for 2 days without history of trauma. The patient had history of hemophilia C. The computed tomography (CT) scan revealed subcortical hemorrhage of the right temporal lobe. His GCS at admission was 15. The patient had no neurological deficit. An urgent consultation with the treating hematologist was performed, and a decision was made to manage the patient conservatively (fresh frozen plasma (FFP) 4 units, mannitol 10% 1000 mg, tranexamic acid 1000mg). 10 hours after admission, his GCS and CT scan of the brain were unchanged. 36 hours after admission, the neurological status of the patient was worsened. His GCS dropped to 12.

Results A decision was made to immediately perform a temporal craniotomy with evacuation of intracerebral hematoma. Surgery and the postoperative period were uneventful. The following 2 days he received 4 units of FFP, tranexamic acid 1000mg and mannitol 10% 1000 mg/day.

Conclusion Spontaneous intracranial hemorrhage is a serious and potentially fatal sequela of Hemophilia. Correction of clotting factor deficiency is of paramount importance prior to surgery and in the immediate post-operative period.

Disclosure of Interest Nothing to disclose

P109/299 IMAGING AND MORTALITY OUTCOMES AFTER MIDDLE MENINGEAL ARTERY EMBOLIZATION: A CASE-SERIES REPORT

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Introduction SDHs are more prevalent among the elderly and can cause significant morbidity and mortality. n-BCA has proven to be an effective and safe agent for embolization of middle meningeal artery (MMA).

Aim of Study We present a retrospective analysis of patients who underwent MMA embolization for SDH.

Methods We included 31 patients who were diagnosed with chronic or acute-on-chronic SDH and underwent MMA embolization with n-BCA. Primary endpoint was >50% SDH reduction, secondary endpoint was all-cause mortality. Patients were separated into outcome groups and their variables were compared using Wilcoxon rank-sum, or Fisher's exact tests. Through logistic regression we determined variables that influenced SDH reduction and mortality.

Results Hypertension (n=23; p=0.04), antiplatelet (AP) (n=8; p=0.02), and MMA embolization via radial approach (n=18; p=0.004) had <50% SDH reduction. Embolization via femoral approach (n=13; p=0.004), and longer mean fluoroscopy times (43.2 minutes vs. 28.2 minutes; p=0.03) had >50% SDH reduction. On logistic regression, femoral approach (OR 12; 95% CI 1.9, 76.4; p=0.004) and longer fluoroscopy times (OR 1.1, 95% CI 1.0, 1.1; p=0.03) had >50% of SDH reduction. Mortality in patients (n=6) was not associated with SDH or the procedure (p>0.05.)

Conclusion Our small sample size underestimates the effect some variables may have on radiographic and clinical outcomes. Hypertension and use of AP may play a role in hematoma resolution; however, a bigger cohort is needed to confirm these hypotheses. Future randomized controlled trials will help establish MMA embolization as the primary method for SDH management given its safety and efficacy.

Disclosure of Interest Nothing to disclose

3.1 OTHER – Innovation

P110/79 DRUG DELIVERY TO THE BRAIN: DOES ENDOVASCULAR HAVE A ROLE?

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Introduction Drug delivery to the brain remains challenging mainly due to the blood brain barrier. We previously reported on cisterna magna (CM) microcatheterization through a lumbar puncture for gene therapy of Tay Sachs disease. Technology for CFS drainage in treatment of hydrocephalus (eShunt, Ceravasc) has enabled transvenous access to the cerebellopontine angle (CPA) cistern

Aim of Study We hypothesize that CPA injection is safe and comparable to the biodistribution of scAAV9-CB-GFP observed with CM injection.

Methods Eight sheep were injected with scAAV9-CB-GFP into the CPA (n=4) and CM (n=4). Through a lumbar puncture, a 1.7F microcatheter with 0.014' micro-guidewire was navigated into either the CPA cistern or CM under fluoroscopy. Cone-beam computed tomography fused with MRI was used to confirm accurate microcatheter placement. scAAV9-CB-GFP (1.0 x 10¹⁴ vg in 3 ml) was injected at 200µl/min. Animals were sacrificed 3 weeks post-procedure. Anti-GFP antibody immunohistochemistry was performed and vector genome biodistribution was determined by qPCR.

Results GFP immunohistochemistry and qPCR showed stronger transduction profiles in the parietal cortex in the CPA cohort compared to CM and modest increase of GFP in the dorsal midbrain. Strong immunoreactivity was also observed in the ventral aspect of the cingulate gyrus. Vector genome quantification of different brain structures showed comparable results between CPA and CM injection routes.

Conclusion CPA delivery of AAV9 resulted in increased transduction of the parietal and cingulate cortex, comparable to that observed with CM injections. Provided is preliminary evidence that CPA infusion of gene therapy is safe and provides widespread distribution throughout the brain.

Disclosure of Interest AM, CH, BB: Cerevasc

HB, VA, EH, aL, RK, HG: Nothing to disclose

MG: No relevant disclosures

P111/88

ABSORBABLE GELATIN COMPRESSED SPONGE (GELFOAM) EMBOLIZATION OF DISTAL EXTERNAL CAROTID ARTERY BRANCHES IN INTRA-ARTERIAL CHEMOTHERAPY FOR RETINOBLASTOMA

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Introduction In intra-arterial chemotherapy for retinoblastoma, a backflow from unreachable external carotid artery branches in the ophthalmic artery can be challenging.

Aim of Study We describe a novel endovascular technique using Gelfoam[®] pledgets to occlude temporarily those distal external carotid artery branches to halt this competitive backflow.

Methods We queried our prospectively collected database of 327 consecutive patients treated for retinoblastoma by intra-arterial chemotherapy and identified those employing Gelfoam[®] pledgets. We describe this new technique with emphasis on feasibility and safety.

Results We treated 11 eyes with 14 infusions of intra-arterial chemotherapy using Gelfoam[®] pledgets to occlude the distal branches of the external carotid artery. We report no perioperative complications due to this occlusion technique. At the ophthalmologic follow-up one month after the injection of Gelfoam[®] pledgets, all cases showed tumor regression or stable disease. Two injections into the same eye as the rescue intra-arterial chemotherapy infusion resulted in a transient exudative retinal detachment, and one injection in a heavily pre-treated case was followed by iris neovascularization and retinal ischemia. None of the pledget injections led to irreversible vision-threatening intraocular complications.

Conclusion Intra-arterial chemotherapy in retinoblastoma using Gelfoam[®] to transiently occlude the distal branches of the external carotid artery and reverse the backflow into the ophthalmic artery seems feasible and safe. Larger series will help to confirm the effectiveness of this new technique.

Disclosure of Interest Nothing to disclose

P112/92

THE CURRENT DIAGNOSTIC PERFORMANCE OF MRI-BASED RADIOMICS FOR GLIOMA GRADING

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Introduction Multiple radiomics-based models have been proposed for glioma grading with different magnetic resonance imaging sequences, models, and features.

Aim of Study Given the heterogeneity and rapid expansion of radiomics for glioma grading, we aimed to better define the overall performance of these different techniques.

Methods We conducted a systematic review of the literature and a meta-analysis of studies reporting on radiomics for glioma-grade prediction. A comprehensive literature search of the databases PubMed, Ovid MEDLINE, and Ovid EMBASE was designed and conducted by an experienced librarian with input from the authors. We estimated overall sensitivity (SEN) and specificity (SPE). Event rates were pooled across studies using a random-effects meta-analysis, and the χ^2 test was performed to assess the heterogeneity.

Results Overall SEN and SPE for differentiation between low-grade glioma (LGG) and high-grade glioma (HGG) were 91% and 84%, respectively. As for the discrimination task between WHO grade III and WHO grade IV, the overall SEN was 89% and the overall SPE was 81%. There is a better trend for modern non-linear classifiers while textural features are the most used and the best-performing (28.6%).

Conclusion The current diagnostic performance of radiomics for glioma grading is higher for the LGGs vs. HGGs discrimination task than the WHO grade III vs. IV task, both in terms of SEN and SPE. In the forthcoming years, we expect even more precise models, especially for the LGGs vs. HGGs categorization.

Disclosure of Interest Nothing to disclose

O113/97

SINGLE CENTER EXPERIENCE WITH 253 NEUROLINTERVENTIONS PERFORMED WITH RIST RADIAL ACCESS SYSTEM

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Introduction Transradial access (TRA) for endovascular procedures has gained popularity in neurointerventional society. The RIST 079 Radial Access System (Medtronic) is the first available device dedicated to TRA. To the best of our knowledge, we present the largest cohort of patients treated with RIST TRA.

Aim of Study To evaluate the application, safety, and limitations of the RIST catheter.

Methods Neurointerventional procedures in a single institution from April 2021 to April 2023 with TRA with RIST catheter