

with aneurysm occlusion and improved mass effect on follow-up MRI/MRA at 6 months.

Conclusion In conclusion, careful planning is necessary for endovascular treatment of giant aneurysms. Consideration of larger inflow volumes and longer stent landing-zones can prevent complications. In cases of complications, trans-circulation rescue therapy may facilitate stent re-catheterisation allowing for repositioning, or stent displacement allowing for deployment of a new device.

Disclosure of Interest No conflicts of interest.

Dr S Kular – Nothing to disclose.

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P080/209 **MULTICENTER EXPERIENCE WITH SELECTFLEX ACCESS CATHETERS FOR THE EMBOLIZATION OF ANEURYSMS USING INTRA-SACULAR AND ENDO-LUMINAL FLOW DIVERSION**

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Introduction The SelectFlex guide catheters (Q'Apel Medical, Fremont, CA) are novel, dual-mode next generation 7fr. 072' distal access guide catheters with a proprietary flexible stent embedded within the distal wall of the catheter. This enables physician-controlled modulation of the catheter between track and support modes.

Aim of Study We present a multicenter experience which investigates the safety and efficacy of these catheters in the treatment of intracranial aneurysms that traditionally require tri-axial support, namely intrasaccular and endoluminal flow diversion.

Methods A retrospective review of consecutive cases utilizing the SelectFlex guides was performed at 4 institutions from February 2020 – October 2022 under IRB approval.

Results A total of 366 consecutive Selectflex cases were identified. Of those, 150 flow diversion cases were performed (121 endoluminal, 29 intrasaccular); 95 via radial access and 55 via femoral access. 78% of cases were performed bi-axially. The Selectflex catheter was most commonly placed in the posterior genu of the cavernous internal carotid. There was no incidence of vascular injury or dissection. Three adverse events identified were identified: an intraprocedural rupture during WEB placement, epistaxis two weeks post op, and metabolic encephalopathy unrelated to the procedure. Utilizing MSRP data, using Selectflex in a bi-axial approach versus a tri-axial construct can save up to \$800/case.

Conclusion Use of the Selectflex catheters was found to be safe, efficacious and cost effective for intra-saccular and endoluminal flow diversion. We found that using this catheter can simplify procedures, standardize device usage across program, decrease inventory constraints, and reduce cost per procedure.

Disclosure of Interest This manuscript was developed, researched, analyzed, and written independent of financial or industry support or involvement.

The following potential COI are Q'Apel Medical
Siemens Healthineers

Medtronic
Integra Lifesciences
Cerenovus
Stryker
Penumbra
Microvention
Balt

P081/218 **MORPHOMECHANICAL ANALYSIS OF INTRACRANIAL ANEURYSMS**

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Introduction It is unknown why aneurysm rupture occurs at a specific location in the aneurysm wall.

Aim of Study Perform a comprehensive analysis of brain aneurysms. This includes aneurysmal wall enhancement (AWE), computational fluid dynamics (CFD) and finite element analysis (FEA) of different areas of the aneurysm.

Methods Forty-seven unruptured saccular aneurysm were included in the study. 3T high resolution vessel wall imaging was performed. 3D Segmentations of the aneurysms were generated with 3D Slicer to assess: AWE using post-contrast signal intensity (SI) heatmaps; Wall Tension (WT) calculated from FEA; time-averaged wall shear stress (TAWSS), oscillatory shear index (OSI), and wall shear stress gradient (WSSG) from CFD. A detailed compartmental analysis was performed.

Results Eighteen aneurysms were irregular and eleven had blebs. WT, TAWSS, and WSSG were higher in the neck compared to the dome ($p < 0.001$, $p = 0.02$ and $p < 0.001$, respectively). Conversely, AWE and OSI were higher in the dome compared to the neck ($p = 0.01$ and $p = 0.03$, respectively). In aneurysms with blebs, WT, WSSG, and AWE were significantly different between the bleb, neck, and aneurysm body ($p < 0.001$, $p = 0.04$ and $p = 0.03$, respectively). Blebs had the highest AWE in the aneurysm. However, the lowest points of WT and WSSG in the aneurysms were in the bleb.

Conclusion A comprehensive morphomechanical assessment may identify high risk areas of rupture within the aneurysm. Unstable areas, such as blebs, had a high AWE and low WSSG and WT. The morphomechanical features also differed in the aneurysm neck compared to the body.

Disclosure of Interest Nothing to disclose

P082/226 **EFFICACY AND SAFETY OF PIPELINE SHIELD STENTS AND FLOW-DIVERTING STENTS WITHOUT MODIFIED SURFACES IN PATIENTS WITH INTRACRANIAL ANEURYSMS**

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Introduction Few studies have compared the Pipeline Shield stents with previous generations of flow-diverting stents (FDs) for treating unruptured intracranial aneurysms (IA).

Aim of Study This study aimed to evaluate the efficacy and safety of Pipeline Shield stents and FDs without modified surfaces.

Methods The present evaluation is a retrospective cohort study of patients endovascularly treated for unruptured IA. The data analyzed was obtained from the anonymized database of the institution's Interventional Radiology service.

Results The aneurysms treated with Pipeline Shield stents had higher six-month (OKM D; 87.5% vs. 71.4%, p-value: 0.025) and one-year (OKM D; 82.5% vs. 63.0%, p-value: 0.047) occlusion rates than aneurysms treated using FDs without modified surfaces. No differences between the devices were found at the one-year follow-up in ischemic stroke (p-value: 0.939) and hemorrhagic complications (p-value: 0.559).

Conclusion The treatment with Pipeline Shield stent was as safe as with FD stent without modified surfaces. However, they showed a greater occlusion efficacy during one-year evaluation period.

Disclosure of Interest nothing to disclose

P083/233 ANGIOGRAPHIC OUTCOMES OF EMBOLIZATION IN PATIENTS WITH INTRACRANIAL ANEURYSMS WITH COIL-ASSISTED LASER CUT VERSUS BRAIDED STENTS

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Introduction Intracranial aneurysms are a focal dilatation of the vessel wall, the rupture of these, causes subarachnoid hemorrhage. Until now, endovascular management is the ideal treatment, providing the interventionist a range of options among which the stent and coils embolization stands out because of its occlusion rate.

Aim of Study This study presents the results of a retrospective cohort comparing the effectiveness, morbidity, and mortality of IA treatment with laser-cut stent-assisted coils versus braided stents.

Methods Retrospective cohort of patients diagnosed with unruptured intracranial aneurysms treated with coil-assisted laser-cut stents or braided stents.

Results 138 patients with 147 intracranial aneurysms were analyzed, with the main antecedent of arterial hypertension (48.55%), the most used stents group were the laser cut stents, the most used among these was the solitaire (54.95%). Hydrocoils were used in 66.89% of the patients and in-stent angioplasty was performed in 6.12%.

Conclusion Treatment of patients with intracranial aneurysms with laser-cut stents or braided stents and coils is just as safe and effective.

Disclosure of Interest Nothing to disclose

P084/238 PEGASUS (HPC) FLOW DIVERTE STENT: PRELIMINARY RESULTS FROM A SINGLE CENTER EXPERIENCE

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Introduction The use of flow diversion devices to treat intracranial aneurysms has recently increased.

Aim of Study Assess the safety and efficacy of the pEGASUS (HPC) FD device.

Methods Between May 2022 and May 2023, we retrospectively identified all patients treated with pEGASUS (HPC) FD at our center. Aneurysms located in the anterior and posterior circulation were included, as well as previously treated aneurysms; no previous parent vessel stent-treated aneurysm were included. All patients underwent a combination of coiling and FD treatment. Imaging FU included a MR-angiography (MRA) at 2 days and at 3–6 months after treatment. Our primary safety endpoint was the incidence of complications and mortality at follow-up, with the primary efficacy endpoint being complete aneurysm occlusion on follow-up.

Results 15 patients underwent treatment, the mean aneurysm dome width was 6.7 ± 1.5 mm and neck width 4.9 ± 1.4 mm. Adjunctive coiling was performed in all patients with jailing technique (42.8%), direct crossing of the FD (28.6%) and subsequent FD deployment after coiling (28.6%). There were no intraprocedural complications and on 3-months MRA FU a complete aneurysm occlusion (mRROC 1) was seen in 22.3%, a mRROC 2 in 66.7%, and a mRROC 3a/b in 11.0%. In our series at 3 months FU the mortality rate was 0%.

Conclusion In our small case series, the pEGASUS (HPC) FDs appears as an effective and safe device for intracranial aneurysm treatment, with a high aneurysm occlusion rate with a single device and a low mortality rate at 3-months FU. Long-term FU data are pending.

Disclosure of Interest I have nothing to disclose

P085/243 FLOW DIVERSION FOR MCA BIFURCATION ANEURYSMS – LESSONS LEARNT OVER 5 YEAR EXPERIENCE

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Introduction Herein, we present our results of flow diversion at MCA bifurcation reporting complications, occlusion rates and lessons learnt over course of 5-year period.

Methods MCA bifurcation aneurysms treated by flow diversion were included. Data was collected retrospectively about patient demographics, aneurysm characteristics, previous treatments and follow-up findings. Outcomes assessed included angiographic occlusion, fate of jailed branches and procedural complications.