

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.

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Dr S Kular – Nothing to disclose.

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Dr G Tse – Nothing to disclose.

**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 embedden 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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