

**Aim of Study** Investigating variations in fetal and non-fetal configurations and its hemodynamic impact on PCOM aneurysms.

**Methods** 3D-DSA data of 18 patients harboring bifurcation aneurysms at the PCOM are collected. 11 patients demonstrate a FPC and 7 patients a non-FPC. Patient-specific 3D models containing at least one bifurcation distal the aneurysm in the anterior circulation as well as the PCOM itself are extracted. Using image-based blood flow simulations, hemodynamics of all aneurysm models are calculated. The outflow of the PCOM is artificially varied representing fetal and non-fetal conditions for every model.

**Results** PCOM aneurysms generally exhibit a lower wall shear stress on the aneurysm wall compared to the surrounding parent vessels. Due to the increase of the PCOM outflow, indicating a fetal state, higher local wall shear stresses are detected at the distal aneurysm side. Furthermore, fetal configurations show higher velocities in the PCOM itself as well as a slightly higher flow distribution in the aneurysm sac.

**Conclusion** The presence of posterior anatomical variations affects the hemodynamic parameters of PCOM bifurcation aneurysms. In particular, the presence of an FPC has an unfavourable effect on the intraaneurysmal flow dynamics.

**Disclosure of Interest** no.

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#### ANEURYSM WALL ENHANCEMENT AND RADIOMIC FEATURES COULD HELP IDENTIFYING THE SYMPTOMATIC ANEURYSM IN PATIENTS WITH MULTIPLE INTRACRANIAL ANEURYSMS

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10.1136/jnis-2024-ESMINT.119

**Introduction** Identifying the symptomatic aneurysm in patients with multiple intracranial aneurysms (MIAs) can be challenging. Aneurysm wall enhancement (AWE) is a potential tool for assessing intracranial aneurysms (IAs).<sup>1</sup> Radiomic features (RFs) offers detailed voxel-imaging analysis.<sup>2</sup> AWE and RFs can offer a novel approach in the assessment of symptomatic aneurysms in patients with MIAs.

**Aim of Study** Analyze AWE and RFs of symptomatic aneurysms in patients with MIAs.

**Methods** Patients with MIAs underwent high resolution 3T MRI. Manual segmentations of the aneurysm wall were created using 3D Slicer. RFs were extracted using an add-in. A previously described pipeline was employed to quantify the signal intensity (SI) of the aneurysm wall.<sup>3</sup> The mean SI after gadolinium administration was computed and defined as three dimensional-circumferential AWE (3D-CAWE). Aneurysms with a 3D-CAWE higher than the mean SI of the corpus callosum post gadolinium were classified as positive. Student's t test and logistic regression were conducted for the statistical analysis.

**Results** Twenty patients with MIAs and a total of 47 saccular aneurysms were included. 7 aneurysms were symptomatic and 40 were asymptomatic. 130 RFs were extracted. 3D-CAWE was different between symptomatic and asymptomatic aneurysms ( $p < 0.05$ ). 3D-CAWE positive IAs were more likely to be symptomatic (OR= 23.75,  $p=0.04$ ). Three RFs were different ( $p < 0.05$ ) between symptomatic and asymptomatic IAs.

**Conclusion** 3D-CAWE and radiomics analysis could help identify the symptomatic aneurysm in patients with MIAs.

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#### ANTERIOR COMPLEX ANEURYSM TREATED WITH LOW-PROFILE FLOW DIVERTER STENT AND 'KISSING' TECHNIQUE

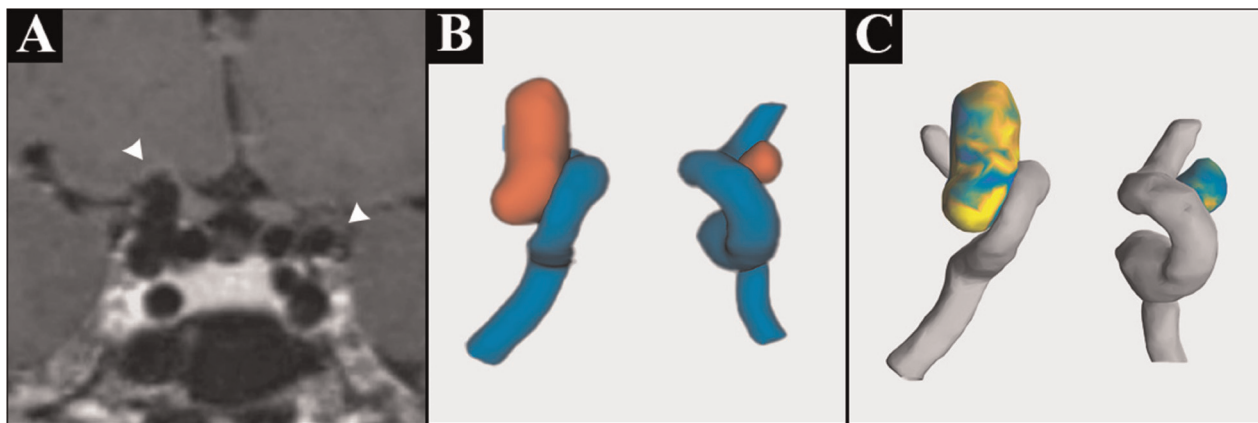
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10.1136/jnis-2024-ESMINT.120

**Introduction** To successfully treat some complex wide-neck bifurcation aneurysms by using a single-stent technique is a challenge. Although kissing-balloon-assisted coiling has been attempted, this technique is almost impossible for treating extremely wide-neck bifurcation aneurysms. In some complex bifurcation aneurysms, especially those in which the base of the aneurysm directly involves both bifurcation branches, a better option may be preserving both branches by using the kissing-stent technique.

**Aim of Study** The purpose of this study is to evaluate the efficacy and safety of the kissing-stent technique and to report our experiences based on 8 cases.

**Methods** A retrospective review was conducted for all patients who underwent endovascular treatment of aneurysms in our department between January 2020 and December 2023 to



**Abstract P083 Figure 1** Pipeline of AWE extraction. A) 3T MRI showing aneurysms in the left and right internal carotid artery. B) 3D Slicer segmentation. C) AWE heat-map generated