Results In 75% of the cases the aneurysm was identified correctly just using the SAS, influenced significant by aneurysm location (p=0.019), Fisher-Score (p=0.008) and aneurysm size (p=0.017). The highest rate of aneurysm detection was given for MCA- (90%) and BA-aneurysms (90%), followed by ACOM- (80%) and ACA-aneurysms (80%). The measured aneurysm size in the correctly identified aneurysm significantly correlates to the size measured in the DSA (p<0.001) and a cut point of 51 HU discriminates aneurysms from SAH with a specificity of 92% and a sensitivity of 86% (Youden’s index 0.78).

Conclusions The aneurysm location and size can be determined in unenhanced CT images in many cases using the new SAS (sparing aneurysm sign). Whereas quantitative measurements of HU can support the aneurysm detection.

REFERENCES

Do you have any conflict of interest to declare?: No

P09 THE CONTOUR DEVICE FOR THE TREATMENT OF RUPTURED ANEURYSMS – RESULTS, LEARNINGS AND LIMITS
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Introduction The use of intrasaccular flowdiverters can be effective and fast for the treatment of acutely ruptured aneurysms. Especially for wide neck aneurysms, when an acute stenting can be avoided. Here we report the initial results from our first patients treated with the novel CONTOUR device after acute aneurysm rupture.

Aim of study To investigate the efficiency and safety of the use of the CONTOUR device for acutely ruptured aneurysms.

Methods We retrospectively analyzed data of patients treated with CONTOUR after an acute aneurysm rupture, for the occurrence of any rebleeding, any periprocedural complications, the implantation time, and the mRS at presentation and at discharge.

Results At the time of submission 18 of our 55 Contour patients were treated after acute aneurysm rupture. The median mRS at presentation was 4 ± 2. The median aneurysm width and dome-to-neck ration were 5.7 ± 3.9 mm and 1.7 ± 0.6. The median implantation time was 39 ± 41.6 min. Additional Coiling was used in 5 of 18 cases (28%). Periprocedural complications occurred in 4 of 18 patients (22%). The median mRS at discharge was 2.5 ± 2.7. Imaging before discharge showed complete occlusion in 17 of 18 cases (94.4%). No rebleeding occurred until discharge.

Conclusions From our limited experience, the occlusion of acutely ruptured aneurysm with a CONTOUR device is efficient and safe concerning the risk of early rebleeding. The possibility of treating ruptured wide neck aneurysms without acute stenting is promising but needs further investigation. Long term stability of this technique has to be proven.

REFERENCES

Do you have any conflict of interest to declare?: Yes

Conflict of Interest Statement Fritz Wodarg received honorarium for lectures and proctoring, as well as travel expenses from Cerus Endovascular and Microvention.

P10 IMPACT OF SECONDARY FLUID MOTION AND WALL SHEAR STRESS IN SIDEWALL ANEURYSM INITIATION
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Purpose Wall shear stress (WSS) distribution has been associated with aneurysm formation. Results of WSS studies are hampered by the subjective geometry creation for numerical studies. We analysed the crossectional flow fields across aneurysm bearing locations, considering that the flow field is less susceptible to errors of geometry as the WSS itself.

Materials and Methods Computational Fluid Dynamics (CFD) models of 30 supraclinoid ICA aneurysms were analysed. The aneurysms were virtually removed with an objective technique to reconstruct the pre-aneurysmal state. Scaled boundary conditions were used for each patient for the pulsatile simulations. An evaluation method was developed to inspect the flow field in cross-sections along the arterial centerline. The velocity vectors at these cross-sections were decomposed into primary axial and secondary components, such as circumferential and radial flows. The method allows a direct comparison between the topological markers of the centerline (cross-sectional diameter, curvature, torsion) and the flow field.

Results Secondary flows at the cross section of the removed aneurysm were predominantly circumferential in both paraphthalmic and distal supraclinoid ICA locations. In these latter cases, a dominant radial flow pattern was observed at cross-sections of the paraphthalmic bend (typically with large deflections) proximal to the aneurysmal location.

Conclusions Our results demonstrated more robust circumferential secondary flows at cross-sections in characteristic aneurysmal locations of the ICA, which may serve as the source of uneven WSS distribution over the vessel wall. The presented evaluation gives a more profound understanding of the hemodynamics involved in the formation of aneurysms.

REFERENCES
1. Do you have any conflict of interest to declare?: Yes
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