

**P091/271 REASONS AND CHALLENGES ASSOCIATED WITH RETRIEVAL OF THE WOVEN ENDOBRIDGE AFTER INTRASACCULAR PLACEMENT**

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**Introduction** During the course of endovascular treatment of aneurysms with the Woven Endobridge (WEB), it may be necessary to retrieve the device to improve its position, to change to a different size or type, or if detachment attempts fail.

**Aim of Study** The aim of this study was to retrospectively review the frequency, reasons and potential complications associated with WEB retrieval.

**Methods** Data from 171 WEB procedures performed at two medical centres were analysed, with 32 cases requiring WEB retrieval. Aneurysm characteristics, procedural details, complications, angiographic results, and clinical outcomes were evaluated.

**Results** The mean aneurysm size was  $6.2 \pm 2.1$  mm, with 11 aneurysms (34.3%) initially ruptured. WEB retrieval was performed in 25 cases (78.2%) for sizing, 6 cases (18.8%) for repositioning and 1 case (3.2%) for failed deployment. Two patients experienced complications during retrieval: 1) Formation and dislodgement of an appositional thrombus during oversized WEB retrieval in a ruptured basilar tip aneurysm resulting in a small posterior infarct (modified Rankin Scale score 3 at discharge). 2) Aneurysm rupture during WEB retrieval, leaving the newly implanted WEB in the subarachnoid space.

**Conclusion** Although complications from WEB retrieval are rare, interventionalists should be aware of their potential occurrence and the retrieval procedure should always be approached with caution and deliberate care.

**Disclosure of Interest** CK serves as consultants for Acandis GmbH (Pforzheim, Germany), CK and TL serve as proctor for MicroVention Inc./Sequent Medical (Aliso Viejo, CA, USA). David Zopfs is on the speaker's bureau of Philips (Amsterdam, the Netherlands) and lecturer for Amboss GmbH (Cologne, Germany). The other authors declare that they have no competing interests.

**P092/273 MORPHOLOGICAL CHARACTERISTICS OF SMALL RUPTURED INTRACRANIAL ANEURYSMS**

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**Introduction** Accumulating evidence challenges the belief that small intracranial aneurysms have a low risk of rupture.

**Aim of Study** The aim of this study was to identify the angiographic characteristics of ruptured aneurysms  $\leq 7$  mm and to assess their clinical significance.

**Methods** Retrospective analysis of 385 patients (149 unruptured, 236 ruptured). Two- and three-dimensional digital subtraction angiography evaluated aneurysm location, size parameters, angulations, morphology, and parent artery diameter.

**Results** Ruptured aneurysms were more common in the anterior communicating, posterior inferior cerebellar, and internal carotid termini. Ruptured aneurysms had greater height (AUC

0.60,  $p < 0.01$ ), and aneurysm angle (AUC 0.61,  $p = 0.02$ ) but smaller dome (AUC 0.44,  $p = 0.02$ ) and neck width (AUC 0.38,  $p < 0.01$ ). The calculation of size quotients improved the prediction of rupture: aspect ratio (AUC 0.77,  $p < 0.01$ ) and size ratio (AUC 0.76,  $p < 0.01$ ). Morphology became insignificant after adjustment ( $p = 0.92$ ).

**Conclusion** Small ruptured aneurysms often have an elongated and tilted shape, which is reflected by a high size and aspect ratio. Identification of angiographic characteristics of small aneurysms aids in risk assessment and management strategies for unruptured aneurysms. Further studies are needed to determine optimal management approaches.

**Disclosure of Interest** CK serves as consultants for Acandis GmbH (Pforzheim, Germany) and proctor for MicroVention Inc./Sequent Medical (Aliso Viejo, CA, USA). David Zopfs is on the speaker's bureau of Philips (Amsterdam, the Netherlands) and lecturer for Amboss GmbH (Cologne, Germany). The other authors declare that they have no competing interests.

**P093/274 HYBRID MANAGEMENT OF COMPLEX VASCULAR PATHOLOGY**

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**Introduction** Currently treatment of cerebral vascular pathology has a huge arsenal due to the expansion of microsurgical and endovascular techniques having different advantages and restraints.

**Aim of Study** Aim of this study was to analyze the effectiveness and safety of the hybrid approach in the management of cerebral vascular pathology.

**Methods** We performed retrospective analysis of records of 21 patients, who underwent microsurgical and endovascular management of complex cerebral vascular pathology. The treatment strategy was discussed by dual trained neurosurgical team. The initial Hunt&Hess scale, complications, postoperative 3-month MRS were analyzed.

**Results** Among 21 patients, 6 presented with subarachnoid hemorrhage complicated with intracerebral hematoma. These patients underwent emergent coil embolization of the aneurysm, followed by decompressive craniectomy with evacuation of hematoma. Two patients among them underwent clipping of regrown aneurysm after three months follow-up. 9 patients had ruptured aneurysms coiled at admission, who further underwent clip ligation of the same aneurysm because of regrowth of previously coiled aneurysm. Four patients had multiple aneurysms, ruptured one was coiled at admission, unruptured aneurysm was clipped electively after initial hospitalization. One patient with arteriovenous malformation initially underwent onyx-embolization of the malformation, which was later completely resected. One patient with polycystic kidney disease underwent staged coiling and clipping of multiple intracranial aneurysms. Neither intraoperative nor postoperative mortality and complication was observed in our series. Mean Hunt&Hess score was 2.4. All patients were independent at 3-month follow up ( $MRS \leq 2$ ).

**Conclusion** Hybrid approach is safe and effective method in management of vascular pathology.

**Disclosure of Interest** Nothing to disclose