Aim of the Study To evaluate the accuracy of MRI for follow up after WEB implantation compared to gold standard DSA.

Methods A total of 42 aneurysms treated with WEB were included. Two experienced readers analysed the anonymised postprocedural MRI, with TOF sequences with and without gadolinium, and DSA images independently, using the WEB Occlusion Score (WOS).

Results From our data we found corresponding WOS results from MRI compared to DSA in 60.53% of the cases. With DSA as reference MRI revealed false positive results in 23.7%, and false negative results in 15.8% of the cases. Inter-rater agreement was 90.48%. The MRI sensitivity was 84.2%, the specificity 76.32%.

Conclusions From this data WEB follow up with MRI alone bears a high risk of false findings and cannot replace DSA for a precise WOS assessment.

REFERENCE

1. Nawka MT, Sedlacik J, Frölich A, Bester M, Fiehler J, Buhk JH. Multiparametric MRI of intracranial aneurysms treated with the Woven EndoBridge (WEB): a case of Faraday's cage? *J Neurointerv Surg* 2018 Oct;10(10):988–994. doi: 10.1136/neurintsurg-2017-013625. Epub 2018 Feb 10. PMID: 29440326.

Disclosure FW consults and proctors for Microvention. GK, MP and JM have no conflicts of interest.

EP35 7 T MR IMAGING OF SMALL INCIDENTAL UNRUPTURED INTRACRANIAL ANEURYSMS: FIRST YEAR OF CLINICAL EXPERIENCE

¹P Radojewski, ¹J Slotboom, ^{2,3,4}A Joseph, ^{2,3,4}G Bonanno, ¹T Dobrocky, ⁵D Bervini, ⁵A Raabe, ¹R Wiest, ¹J Gralla, ¹P Mordasini. ¹Institute of Diagnostic and Interventional Neuroradiology, Bern University Hospital, Inselspital; ²Advanced Clinical Imaging Technology, Siemens Healthcare AG; ³Translational Imaging Center, Sitem-Insel; ⁴Departments of Radiology and Biomedical Research, University of Bern; ⁵Department of Neurosurgery, Bern University Hospital, Inselspital, Bern, Switzerland

10.1136/neurintsurg-2021-ESMINT.34

Introduction The majority of unruptured intracranial aneurysms (UIA) can be adequately characterized using 1.5 and 3 T MRI. However, findings in a relevant subgroup of patients can remain unclear due to difficulties in distinguishing aneurysms from vascular anatomical variants.^{1–4} 7 T MRI may provide definitive non-invasive diagnosis in this subgroup of patients due to a higher signal-to-noise ratio, higher spatial resolution and vessel contrast.^{5–7}

Aim of the Study Report on the integration of 7 T MR neurovascular imaging in the clinical routine to provide definitive, non-invasive discrimination of intracranial aneurysm versus normal vascular variants.

Methods We retrospectively analyzed clinical data from patients with suspected incidental UIAs on 3T MRI who underwent 7 T MRI. All patients were scanned within diagnostic work-up or follow-up on an clinically approved 7 T whole-body MR scanner with a 32-channel head coil and had a recent scan on a 3 T scanner with a 32-channel standard head coil.

Results We identified 39 patients who received 7 T MRI. All examinations were performed without interruption or side effects. All images fulfilled criteria of diagnostic quality within routine image reading. No ambiguous findings remained after UHF 7 T MRI and a definitive diagnosis was made according to the analyzed reports.

Conclusions Clinical implementation of 7 T MRI in patients with suspected small incidental UIAs has the potential to

reduce the number of ambiguous vascular findings, secure the diagnosis, reduce the invasive imaging work-up and has therefore an impact on patient management.

REFERENCES

1. Okahara M, et al. Diagnostic accuracy of magnetic resonance angiography for cerebral aneurysms in correlation with 3D-digital subtraction angiographic images: a study of 133 aneurysms. *Stroke* 2002;33(7):1803–8.
2. Li MH, et al. Accurate diagnosis of small cerebral aneurysms ≤5 mm in diameter with 3.0-T MR angiography. *Radiology* 2014;271(2):553–60.
3. Wrede KH, et al. Non-enhanced MR imaging of cerebral aneurysms: 7 Tesla versus 1.5 Tesla. *PLoS One* 2014;9(1):e84562.
4. Monninghoff C, et al. Evaluation of intracranial aneurysms with 7 T versus 1.5 T time-of-flight MR angiography – initial experience. *Rofo* 2009;181(1):16–23.

Disclosure A. Joseph and G. Bonanno are employed by Advanced Clinical Imaging Technology, Siemens Healthcare AG, Bern, Switzerland.

EP36 OPTIMAL TECHNIQUE TO ENSURE PATENT HAEMOSTASIS IN TRANS-RADIAL ACCESS

¹Z Hashim, ¹J Davies, ¹SJ Sammut, ²K Wells, ¹N Qayyum, ¹CK Jadun. ¹University Hospital of North Midlands; ²University of Keele, Stoke-on-Trent, UK

10.1136/neurintsurg-2021-ESMINT.35

Introduction Radial artery occlusion is one of the significant (but thankfully rare) complications of Trans-radial access (TRA). Though it is usually asymptomatic, radial artery occlusion hinders it being used in the future for interventional procedures. Hence, attempts should be made to avoid this by ensuring patent haemostasis post procedure.

Objective To determine optimal way to ensure patent haemostasis.

Methods Patients divided into two groups: Cohort A: After every TRA intervention, patent haemostasis checked with ultrasound and with reverse Barbeau's test.

Cohort B: After every TRA Trans-radial band inflated only by 2 ml air extra beyond minimum air needed to stop bleeding from access site.

Radial artery patency was checked prior to patient discharge from hospital.

Results Each cohort had 30 patients in it.

- Reverse Barbeau's test and ultrasound assessment were equally accurate at checking for patent haemostasis, though ultrasound did take longer and would need an operator skilled in using ultrasound.
- An important observation on ultrasound was that when radial band was over-inflated, the distal radial artery was collapsed, hence showing importance of not over-inflating the band.
- No cases of radial artery occlusion seen in either cohort.

Conclusion All the above three techniques were equally effective in ensuring patent haemostasis post TRA, though the cohort B technique was felt to be the quickest and simplest to perform.

REFERENCE

1. Pancholy S, Coppola J, Patel T, Roke-Thomas M. Prevention of radial artery occlusion-patent hemostasis evaluation trial (PROPHET study): a randomized comparison of traditional versus patency documented hemostasis after transradial catheterization. *Catheter Cardiovasc Interv* 2008 Sep 1;72(3):335–340. doi: 10.1002/ccd.21639. PMID: 18726956.

Disclosure Nothing to disclose