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VESSEL WALL MRI FINDINGS IMPROVE SPECIFICITY FOR DETECTION OF DELAYED IN-STENT STENOSIS FOLLOWING FLOW DIVERSION OF UNRUPTURED ANEURYSMS

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10.1136/neurintsurg-2021-ESMINT.31

Introduction Delayed stenosis can occur following flow diverter (FD) treatment of cerebral aneurysms. Vessel wall MRI (vwMRI) using black blood (BB) sequences can improve evaluation of intracranial vascular pathologies.

Aim vwMRI studies after FD treatment of unruptured intracranial aneurysms were assessed for findings associated with stenosis on digital subtraction angiography (DSA).

Methods According to an IRB-approved protocol, patients with unruptured aneurysms treated with FD were identified in a prospectively-maintained database. FDs with stenosis on six-month DSA were identified, and control cases were then selected, matching for age, gender, vessel segment, and morphology. Three-month vwMRI studies were then evaluated. Stenosis was measured on 3D time of flight (3DTOF) and post-contrast MRA, as well as post-contrast black blood (BB) images. Downstream flow limitation (DFL), intra-FD tissue on BB, or intra-FD intimal enhancement were noted. Fisher's exact tests were performed to compare study groups and identify vwMRI features associated with stenosis on subsequent DSA. Multivariable exact logistic regression analysis was performed using variables with $p \leq 0.200$.

Results 15 patients were analyzed, with no difference in matched variables between patients with and without confirmed stenosis ($p=0.267-0.706$). Stenosis on BB ($p=0.035$), DFL on 3DTOF ($p=0.004$) and postcontrast ($p=0.001$) MRA, and intimal enhancement ($p=0.001$) were associated with stenosis on subsequent DSA. Stenosis on 3DTOF ($p=0.264$) or postcontrast ($p=0.210$) MRA and intra-FD tissue on BB ($p=0.231$) were not. Multivariable analysis found retained significance for stenosis and intimal enhancement on BB ($p=0.001$).

Conclusions Stenosis and intimal enhancement within the FD on BB are associated with stenosis on subsequent DSA.

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Disclosure Nothing to disclose

EP32

FIRST 100 CASES OF TRANS-RADIAL ACCESS IN NEURO-INTERVENTION – A SINGLE CENTRE EXPERIENCE

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10.1136/neurintsurg-2021-ESMINT.32

Introduction Cardiology literature strongly supports Trans-radial access (TRA) in favour of Trans-femoral access (TFA). Initial neuro-intervention data is also promising.

Objectives To compare our initial experience with TRA with TFA.

Methods Electronic patient records of the first 100 neurovascular procedures performed via TRA in our centre and 100 consecutive procedures performed via TFA at the same time reviewed with regards to:

1. Procedure success rate, 2. complication rate, 3. Screening time 4. Patient feedback

Results TRA cohort included (59 cerebral angiograms, 27 aneurysm treatments, 11 mechanical thrombectomy, 3 other).

TFA cohort included (31 cerebral angiograms, 25 aneurysm treatments, 38 mechanical thrombectomy, 6 other).

- Conversion rate from trans-radial to trans-femoral approach was 3/100 (3%).
- Access site complications TRA group (1%), TFA group (2%).
- Mean screening time for cerebral angiogram was slightly longer in TRA group, however, in the aneurysm treatment and thrombectomy cases, it was slightly longer in TFA group.
- Patient feedback was very positive in favour of TRA. Especially, the patients who had previous TFA showed a preference towards TRA.
- We felt TRA did not pose any significant limitation to the procedures but in some cases (especially for the posterior circulation cases) the procedure was easier to perform via TRA.

Conclusion Trans-radial access is a safe and effective way to perform simple and complex neurovascular procedures as evidenced by low complication, low conversion rate even in the initial cases. Screening times should reduce even more with operator experience.

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Disclosure Nothing to disclose

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ABSTRACT WITHDRAWN

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NONINVASIVE FOLLOW-UP OF ANEURYSMS TREATED WITH WEB® – A SYSTEMATIC COMPARISON OF MRI WITH DSA AS GOLD STANDARD

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10.1136/neurintsurg-2021-ESMINT.33

Introduction Brain aneurysm treatment with the Woven Endo Bridge (WEB®) is widely accepted. For long term follow up non-invasive MRI is often used to avoid potential risks from repetitive catheter angiography and for patients' comfort. Previous publications raised doubts about reliability of this procedure, due to relevant metal artefacts caused by the WEB Device.¹