

P104 FOLLOW-UP PROTOCOL FOR INTRACRANIAL ANEURYSMS TREATED WITH FLOW DIVERTERS AND INTRASACCULAR FLOW DISRUPTORS

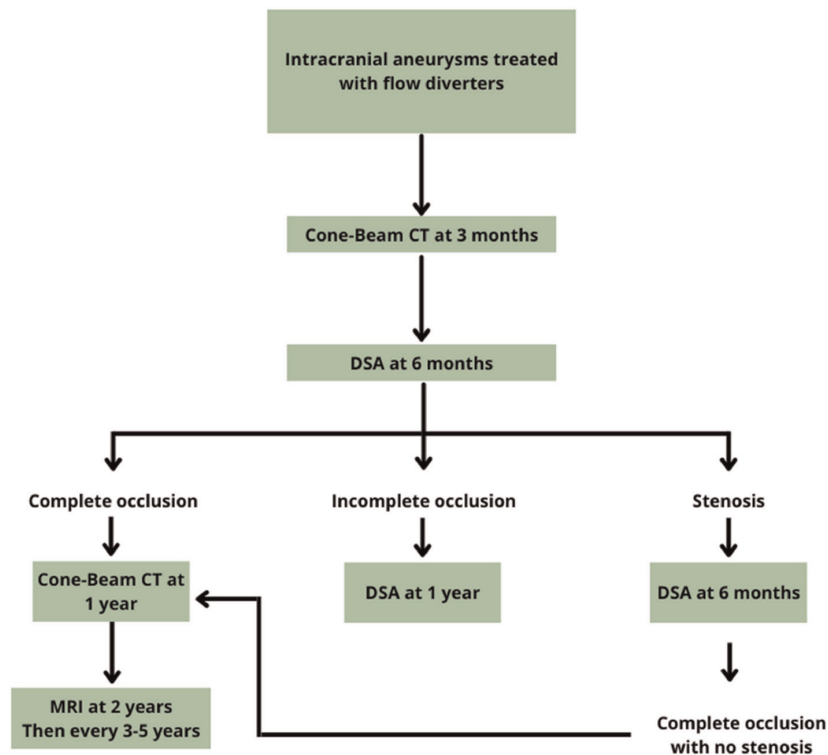
Andrés Barrios López, Alberto Alvarez Muelas, Pedro Navia, Andrés Fernández Prieto, Remedios Frutos, Aranzazu Royo. *Hospital Universitario La Paz, Madrid, Spain*

10.1136/jnis-2024-ESMINT.140

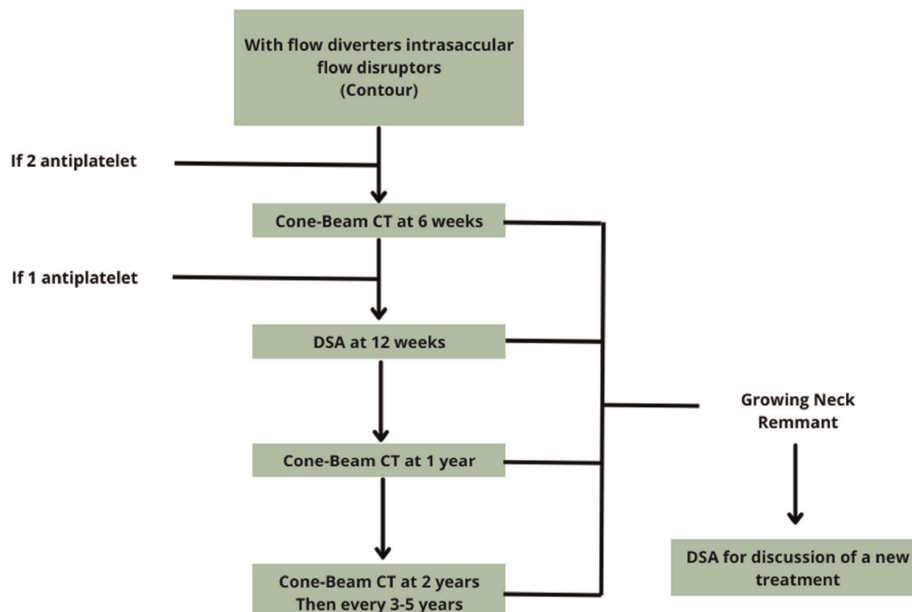
**Introduction** There are no specific recommendations in clinical guidelines about the best time, imaging tests, or intervals for

following up patients with intracranial aneurysms treated with flow diverters and intrasaccular flow disruptors.

**Aim of Study** We aimed to propose recommendations and a protocol based on the scientific evidence for using neuroimaging to monitor intracranial aneurysms that have been treated with flow diverters and intrasaccular flow disruptors without coils. We aimed to specify the most appropriate neuroimaging techniques, the interval, the time of follow-up, and the best approach to defining the imaging findings, with the ultimate



Abstract P104 Figure 1



Abstract P104 Figure 2

goal of improving clinical outcomes while optimizing and rationalizing the use of available resources.

**Methods** Since no completed randomized trials exist, we reviewed the literature and used interim analyses of trials, and meta-analyses of observational and case-control studies to provide recommendations.

**Results** The recommendations are summarized in the attached figures 1 and 2.

**Conclusion** There is a great variability of protocols in each center in the follow-up of intracranial aneurysms that have been treated with flow diverters and intrasaccular flow disruptors. The first control technique after treatment to assess efficacy and stability during the first year will be the Cone-beam CT and DSA, to then move on to the angioRM in long-term control. Doing an DSA again will be indicated when the morphological characteristics change or the degree of closure worsens.

**Disclosure of Interest** no.

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### FLOW DIVERSION FOR THE TREATMENT OF GIANT PARTIALLY THROMBOSED SACULAR INTRACRANIAL ANEURYSMS

James Ayre, Aubrey Smith, Paul Maliakal, Hamed Nejadhamzeeigilani. *Hull Royal Infirmary, Hull, UK*

10.1136/jnis-2024-ESMINT.141

**Introduction** Giant partially thrombosed saccular intracranial aneurysms pose a unique management challenge.

**Aim of Study** The study aimed to describe the outcomes of the use of flow diversion in the treatment of giant partially thrombosed saccular intracranial aneurysms.

**Methods** Patients with giant partially thrombosed saccular intracranial aneurysms treated with flow diversion between 2013 and 2022 were retrospectively reviewed. Data on patient demographics, aneurysm characteristics, endovascular intervention, clinical outcome, and follow-up imaging were recorded.

**Results** Seven patients (57% female) underwent flow diversion, with an average age was 59. Two patients had hypertension, one was an active smoker, and one had a prior subarachnoid haemorrhage. Aneurysm location included the basilar artery tip (n=3), ICA (n=2), PCOM (n=1) and MCA (n=1). Mean maximal aneurysm dimension (thrombosed and filling component combined) was 32mm (24-60). Four patients had received prior endovascular management (coiling (n=3), coiling and WEB device (n=1)). Four types of flow diverter were used, with five patients receiving adjunctive coiling. Complications included flow diverter occlusion due to thrombus formation (n=1) necessitating mechanical thrombectomy and a change in antiplatelet agent, groin complications (n=1) managed medically, and re-presentation with subarachnoid haemorrhage from the vasa vasorum (n=1) resulting in death. All patients received follow-up, with a mean duration of 27.3 months. 71% had complete occlusion (RROC 1) and 85% had adequate occlusion (RROC 1-2) at most recent follow-up.

**Conclusion** Flow diversion is feasible option in the management of challenging giant partially thrombosed saccular intracranial aneurysms; safety and efficacy outcomes can yet be optimised through various means including routine antiplatelet testing.

**Disclosure of Interest** no.

P106

### EVALUATION OF THE SAFETY AND EFFICACY OF THE DERIVO ZHEAL® FLOW DIVERTER UNDER STANDARD OR REDUCED-DOSE SINGLE ANTIPLATELET THERAPY

<sup>1</sup>Sinan Balci, <sup>2</sup>Aycan Uysal, <sup>1</sup>Anil Arat. <sup>1</sup>Hacettepe University Department of Radiology; <sup>2</sup>Hacettepe University Medical School Department of Radiology, Türkiye

10.1136/jnis-2024-ESMINT.142

**Introduction** Flow diverter devices with surface modification or coating have been presented to the market in order to decrease the potential thrombogenicity of the devices and they are supposed to reduce the rate of thromboembolic complication during endovascular treatment.

**Aim of Study** To evaluate the results of the Derivo2Heal® device (D2H), a new fibrin- and heparin-coated flow diverter.

**Methods** Patients treated with D2H were retrospectively evaluated for demographic data, aneurysm characteristics, procedural variables and follow-up data. All patients were treated using a single D2H, monitored by platelet function testing and kept under single antiplatelet therapy with regular or half-dose clopidogrel or prasugrel after the procedure.

**Results** Thirty-three patients with 40 aneurysms were treated. Three presented acutely with subarachnoid hemorrhage. There were no technical failures. During follow-up, one of the acutely ruptured aneurysms reruptured, one patient had a visual TIA, one patient had parent artery thrombosis but remained asymptomatic. All patients were doing well clinically with 1 patient having an mRs of 1 at the last follow-up. The rates of total occlusion on very early angiographic (MRA/CTA or DSA, mean:2.4 months), and mid-term angiographic (mean:11.5 months) follow-up for all aneurysms were 67.6% and 90.9%, respectively.

**Conclusion** The D2H stent with novel coating comprising fibrin and heparin seem to be a safe and efficient device with promising results however further studies comparing the D2H device with its bare counterpart as well as other coated or surface modified flow diverters are needed.

## 1.2. Brain AVM/AVF, spinal vascular malformations

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### TREATMENT OF SYMPTOMATIC EPILEPSY IN INDIVIDUALS WITH BRAIN AVMS: A COMPARISON OF ENDOVASCULAR AND SURGICAL APPROACHES. EXPERIENCE OF THE NATIONAL CENTER OF NEUROSURGERY FOR 12 YEARS

Aiman Maidan, Chingiz Nurimanov, Yerbol Makhambetov. *National Center for Neurosurgery, ASTANA, Kazakhstan*

10.1136/jnis-2024-ESMINT.143

**Introduction** Arteriovenous malformations in the brain can lead to epilepsy.

**Aim of Study** This study aimed to compare the outcomes of microsurgical and endovascular treatment for patients with epilepsy linked to AVM.

**Methods** In this retrospective observational investigation, all patients with brain arteriovenous malformations (AVMs) treated at the National Center of Neurosurgery between 2008 and 2020 were to be reviewed.