

3.1. Innovation

P175 FEASIBILITY OF USING ANGIOSCOPY TO VISUALIZE THE INTERNAL VESSEL WALL OF THE INTERNAL CAROTID ARTERY

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10.1136/jnis-2024-ESMINT.210

Introduction It is not possible to clearly delineate pathological changes in the inner vessel wall with digital subtraction angiography. Angioscopy enables the detection of endothelial pathologies, as demonstrated in the cardiovascular system.[1] In the case of the internal carotid artery, angioscopic imaging has the potential to visualize pathologies as well as the endothelialisation of stents or flow diverters.[2-3]

Aim of Study Verification of the applicability of angiography in the internal carotid artery using vascular endoscopy.

Methods Five internal carotid artery specimens with varying degrees were selected from angiography images (January 2022 to December 2023) at the Department of Neuroradiology, University Hospital, Magdeburg, Germany. The vessel models consist of transparent tubes, optionally with a stent or a flow diverter. Testing includes tracking the movement of a fibre-optic endoscope and endoscopic imaging during retraction. Colour resolution is assessed by marking the tubes to simulate discolouration of the vessel wall.

Results The endoscope was successfully inserted into all vascular models up to the distal end. As vascular tortuosity increased, more force was required to follow the vascular course and ensure precise endoscope placement. Endoscopic recordings showed promising results in all cases. The structure of the stents and flow diverters as well as the different colour markings were distinguishable.

Conclusion The use of angioscopy in the internal carotid artery is a promising clinical imaging technique for visualising intimal changes and devices. Vascular endoscopy can be successfully applied to varying degrees of tortuosity in all vascular models, with increasing shear stress.

Disclosure of Interest no.

3.5. Miscellaneous

P176 PERCUTANEOUS MICROWAVE ABLATION OF PAINFUL SPINAL METASTASIS: AN UPDATED SYSTEMATIC REVIEW OF ANALGESIA AND SAFETY

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10.1136/jnis-2024-ESMINT.211

Introduction Microwave ablation (MWA) is a promising minimally invasive technique for treating spinal metastases, creating larger ablation zones, reducing procedural times, and effectively ablating high-impedance tissues.

Aim of Study To evaluate the efficacy and safety of MWA in managing pain associated with spinal metastases.

Methods A systematic search and analysis were conducted following PRISMA guidelines. Studies were included if they met the following criteria:

- Randomized or non-randomized studies with at least 3 patients (prospective or retrospective)
- Adult patients with spinal metastases
- MWA used alone or combined with other treatments
- Reported pre- and post-MWA pain assessments
- Published in English

Data on demographics, tumor type, lesion location, pain scores, and complications were extracted.

Results The search yielded 14 studies encompassing over 481 patients (M:F=1:1) with 836 treated lesions. All studies reported achieving partial pain response based on International Consensus Endpoint after Radiation Therapy criteria. Additionally, 85.7% of studies showed highly effective pain management (≥ 4 -point reduction on a pain scale to the last follow-up). Lung (35.4%), breast (25%), and gastrointestinal (12.5%) cancers were the most common primary tumors. The thoracic spine was the most frequent site (47%), followed by lumbar (41.3%) and sacral (11.2%). No major complications were observed.

Conclusion This systematic review suggests that MWA, often used in combination with vertebral augmentation, represents a safe and effective treatment for achieving short- to mid-term (24 hours to 6 months) pain control in patients with spinal metastases.

Disclosure of Interest no.

3.2. Clinical Management

P177 UNRUPTURED ANTERIOR COMMUNICATING ARTERY ANEURYSMS: MANAGEMENT STRATEGY AND RESULTS OF A SINGLE-CENTER EXPERIENCE

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10.1136/jnis-2024-ESMINT.212

Introduction Although anterior communicating artery (AComA) unruptured intracranial aneurysms (UIAs) comprise one of the largest aneurysm subgroups, their complex adjacent neurovasculature and increased risk of rupture impede optimal management.

Aim of Study In the present study, we analyzed the results of our diverse strategy in AComA UIAs with the additional goal of assessing the risk of treatment and the incidence of hemorrhage.

Methods We analyzed 131 patients, of which each was assessed by a multidisciplinary neurovascular team and assigned to observation (45.8%), endovascular treatment (34.4%) or microsurgery (19.8%).

Results Median aneurysm sizes were 3, 7.2 and 7.75 mm, respectively. In the observation group, four (7.1%) aneurysms (initially < 5 mm) grew over a median time of 63.5 months and were treated endovascularly. We found that fewer patients in the observation group were smokers ($p = 0.021$). The

aneurysm size ratio was different between the combined treatment versus the observation group ($p < 0.0001$). Noteworthy, there were no hemorrhages in the observational group. Mortality for all patients with available follow-up was 2.4% (3/124) and permanent morbidity was 1.6% (2/124) over a mean follow-up of 64.2 months. These compelling rates refer to a high-risk group with potentially devastating consequences in which we have decreased the annual risk of hemorrhage to 0.14%

Conclusion Using diversified management of AComA UIAs, we have decreased the annual risk of SAH to 0.14% at the expense of 2.4% mortality and 1.6% permanent minor deficit rates.

Disclosure of Interest no.

3.4. ETMINT

P178 ANEURYSM WALL ENHANCEMENT MR IMAGING ON 3T MR – OUR EXPERIENCES

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10.1136/jnis-2024-ESMINT.213

Introduction Aneurysm wall enhancement (AWE) of unruptured intracranial aneurysms on magnetic resonance imaging has been considered as a promising marker of rupture-related risk. Recently, we have started using T1 SPACE fat-sat dark blood sequence with isotropic voxel to visually evaluate AWE on 3T MR.

Aim of Study To present technical background for AWE using T1 SPACE dark blood sequence and our first experiences with AWE imaging.

Methods Using T1 SPACE dark blood sequence pre- and post-gadolinium contrast administration imaging on 3T MR.

Results From March to half of August 2024, 16 patients (3 men, 13 women, mean age 60 ± 12) were imaged. We observed AWE in 10 patients.

Conclusion We successfully implemented new imaging sequence into our routine aneurysm imaging.

P179 STROKE WORKFLOW IN DIFFERENT COUNTRIES – UNIVERSITY HOSPITAL MARTIN, SLOVAKIA

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10.1136/jnis-2024-ESMINT.214

Introduction Stroke is a major global health concern, with a significant impact on mortality and disability rates. Increasing awareness and understanding of endovascular treatment can ultimately save lives and reduce the long-term disabilities associated with stroke. Our hospital is one of 10 medical facilities in Slovakia providing 24 hour mechanical thrombectomy for stroke patients.

Aim of Study Sharing experiences with endovascular treatment of stroke is vital for advancing the field and improving patient outcomes.

Methods Filling out a questionnaire with pre-defined questions uniform for all interviewees.

Results Questionnaire revealing our practice regarding endovascular treatment of stroke.

Conclusion In a rapidly evolving field like endovascular treatment, staying informed and learning from the experiences of others is essential for maintaining high standards of care and pushing the boundaries of what is possible in stroke treatment.

3.2. Clinical Management

P180 RESULTS OF TAILORED ANTIPLATELET THERAPY IN CAROTID ARTERY STENTING

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10.1136/jnis-2024-ESMINT.215

Introduction Carotid stenting requires dual antiplatelet therapy to effectively prevent thromboembolic complications. However, resistance to clopidogrel, a key component of this therapy, may lead to persistent risk of these complications.

Aim of Study The aim of this study was to determine, if the implementation of routine platelet function testing and adjusting therapy was associated with lower incidence of thromboembolic complications and death.

Methods All consecutive patients treated with carotid artery stenting in a single institution over 8 years were enlisted in a retrospective study. Platelet function testing was performed and efficient antiplatelet therapy was set before the procedure. Incidence of procedure-related stroke or death within periprocedural period was assessed. The results were evaluated in relation to the findings of six prominent randomized control trials.

Results A total of 241 patients were treated for carotid stenosis, seven patients undergo CAS on both sides over time. There was 138 symptomatic and 110 asymptomatic stenoses. Five thromboembolic complications occurred, four of them [1,61%] were procedure-related. Two patients died because of procedure-related stroke [0,82%]. Incidence of procedure-related stroke or death was significant lower compared to the results of CREST study [2,01% vs. 4,81%, $P=0,0243$] in the entire cohorts, and to the results of ICSS study in the symptomatic cohorts [2,86% vs. 7,37%, $P=0,0243$], respectively.

Conclusion Tailored antiplatelet therapy in carotid stenting is safe and seems to be related with lower incidence of procedure-related death or stroke rate. To assess whether platelet function testing-guided antiplatelet therapy is superior to standard dual antiplatelet therapy should be considered.