

3.1. Innovation

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

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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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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

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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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Introduction Although anterior communicating artery (ACoM) 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 ACoM 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