

minimally invasive ICH evacuation were included retrospectively if follow-up computed tomography (CT) scans were available for analysis. Hematoma cavity volumes were calculated from the immediate post-procedural and three-month follow-up CT scans using the Analyze Pro software. **Results:** Twenty patients had follow-up CT scans at a mean time of 93 days from hematoma evacuation. The average cavity size at follow-up was 11938.12 mm³ (SD: 6996.49). The change in cavity size compared to the prior CT was 6396.74 mm³ (median 2542; range: -1030-27543; SD: 8472.45). This represented mean growth in cavity volume of 54%. **Conclusions:** This study provides preliminary data describing increase in cavity size after endoscopic minimally invasive evacuation of ICH. Comparison to atrophy in conservatively-managed patients is a further planned avenue of research.

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Missed vertebral artery dissection: a case series

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Background: Vertebral artery dissections are the second most common cause of posterior circulation stroke. Particularly in young people, they must be considered as causes of acute infarction, especially with a history of cervical trauma. Here, we present three cases of vertebral artery dissection that were initially not diagnosed as such. All were caused by uncommon mechanisms; one by self-inflicted neck manipulation, and one as a sequela of falling from a trampoline, and one from minor trauma to the head while standing. **Methods:** This is a series of three cases seen by the authors of posterior circulation stroke secondary to vertebral artery dissection caused by uncommon mechanisms. **Results:** N/A **Conclusions:** Vertebral artery dissection should be considered as a differential diagnosis in patients presenting with acute head and/or neck pain and any neurological findings in relation to acute neck trauma.

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Functional approach using intraoperative brain mapping and neurophysiological monitoring for surgery of arteriovenous malformations in eloquent areas

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Background: Surgical resection of arteriovenous malformations (AVMs) in eloquent areas is significantly associated with greater surgical morbidity. We describe a functional approach for surgical treatment of these lesions **Methods:** A total of 20 patients with AVMs in eloquent areas were surgically treated and retrospectively analyzed. Individualized functional approach, using brain mapping and/or neurophysiological monitoring was performed in each case according to every case specific features and location. Seventeen patients underwent surgery under asleep conditions and 3 patients

underwent awake intraoperative mapping **Results:** There was no mortality. Four patients had hemorrhagic complications (20%). Ten (50%) presented neurological immediate postoperative worsening. Eight of them achieved complete recovery in follow up and 2 showed a permanent deficit. At 6 months follow up all the patients (100%) had good clinical outcome (mRS less than 2). There were no intraoperative seizures but 5 patients (26.3%) developed postoperative seizures. Fifteen patients (75%) had total AVM resection. Language and/or motor function were identified in all but one patient (95%). Each case required changes in surgical strategy to preserve the motor and/or language functions during surgery. **Conclusions:** Intraoperative monitoring and brain mapping are valuable and safe for the treatment of eloquent AVMs by indentifying and protecting motor and language function during resection.

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Acute thrombectomy in patients of 80 years and older: a retrospective analysis of radiological and clinical outcomes with an intention to treat analysis

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Background: The safety and clinical outcomes of thrombectomy in the 80 years or older age group are not yet clear. Our aim is to provide data from clinical practice to assess the safety and efficacy of endovascular thrombectomy in this age group. **Methods:** We retrospectively reviewed consecutive patients of age ≥ 80 referred for thrombectomy procedures at our institutions from 01/01/2015 to 01/09/2015. We collected demographic data, risk factors, clinical and radiological findings, treatment details, clinical and radiological outcomes. **Results:** Data for 75 patients was included. Baseline clinical characteristics are similar to previous trials. There were MCA occlusions in 49% (37/75) and tandem occlusions in 15% (11/75) patients. 67% (50/75) patients received IVtPA. Good reperfusion (mTICI 2b/3) was achieved in 60% (45/75) patients within 224 minutes. Good clinical outcome (mRS 0-2) at 90 days was achieved in 31% (23/75) patients. Results are similar to HERMES data on patients of age ≥ 80 and differences will be discussed. **Conclusions:** Our study adds valuable evidence to the limited data on safety and clinical outcomes in patients 80 years of age and older who undergo thrombectomy. Our findings support the data from clinical trials and confirm that mechanical thrombectomy can be performed safely and in a timely fashion outside of trials with similar results.