presents significant diagnostic challenges. This is a unique case of GPA with sinonasal, airway, skull base, petrous bones, vascular, and brain parenchyma involvement. Methods: We present a case of a 45-year-old female with a several day history of headache and left hearing loss. MRI brain demonstrated a large erosive enhancing soft process in the sinonasal cavity and nasopharynx. Results: She developed new ipsilateral rightward tongue deviation. A second MRI demonstrated disease progression. It showed posterior pharyngeal wall ulceration, involvement of the skull base foramina, petrous bones, and central bony skull erosion. It demonstrated right hemiglossal edema secondary to right hypoglossal nerve compression at the skull base. There was enhancing soft tissue partially encasing the left petrous internal carotid artery and more extensively encasing and narrowing bilateral intradural vertebral arteries with associated brainstem edema secondary to direct mass effect and new left occipital thromboembolic infarct. She underwent a nasopharyngeal biopsy which demonstrated acute inflammation on a background of GPA. Conclusions: There are no pathognomonic imaging characteristics for GPA. By recognizing the common and less-common imaging features, radiologists play a crucial role in both diagnosing and monitoring the disease activity.

Neurotrauma

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Initial imaging predicts mortality in severe traumatic brain injuries in pediatric population - a systematic review and meta-analysis

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Background: The purpose of this systematic review was to synthesize evidence based on existing studies on the ability of initial imaging to predict mortality in severe traumatic brain injuries (TBIs) in pediatric patients. Methods: An experienced librarian searched for all existing studies based on the inclusion and exclusion criteria. The studies were screened by two blinded reviewers. The data was extracted to calculate the sensitivity (SN), specificity (SP), positive predictive value (PPV), negative predicted value (NPV), area under the curve (AUC), and receiver operating characteristic (ROC) for extradural hematoma (EDH), subdural hematoma (SDH), traumatic subarachnoid hemorrhage (tSAH), skull fractures, and edema. Results: Of the 3277 studies included in the search, data could only be extracted from 22 studies. There were a total of 2219 patients, 747 females, and 1461 males. 564 patients died and 1651 survived. 293 patients had SDH, 76 had EDH, 347 had tSAH, 244 had skull fractures, and 416 had edema. Seven of the studies had sufficient data to calculate the AUC, ROC, and generate a forest plot for the imaging findings. Conclusions: Out of the different CT scan findings, brain edema had the highest SN, PPV, NPV, and AUC. EDH had the highest SP to predict in hospital mortality.

Neurovascular and Neurointerventional

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Radial to femoral "through and through" access for high grade ostial subclavian and innominate artery stenoses: a novel technique

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Background: Endovascular approaches are typically preferred to open surgical techniques for symptomatic subclavian/innominate artery stenosis. Due to individual patient anatomy, endovascular treatment from a conventional femoral arterial approach can be technically challenging. Our alternative technique using a combined radial to femoral artery approach can facilitate an otherwise challenging revascularization procedure. Methods: Retrospective analysis between November 2017 to March 2021 yielded five procedures (in four patients) using a combined radial to femoral "through and through" access and stenting technique. Results: All patients presented with hypoperfusion symptoms, either to their extremities, brain, or both. Technical success was achieved in 100% of the five vessels treated in four patients with symptomatic subclavian/innominate artery stenosis using this approach. One of the patients developed a recurrent stenosis after 40 months, requiring a repeat procedure. Three patients received treatment to the left subclavian artery and one to the innominate artery. All of the patients experienced marked symptomatic improvement without significant complications. Conclusions: A combined radial to femoral "through and through" access technique is a simple and safe method to achieve successful recanalization of high grade symptomatic ostial stenoses of the subclavian and innominate arteries.

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Clinical outcome and recurrence rate of chronic subdural hematoma after surgical drainage: a retrospective study

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Background: Chronic subdural hematoma (CSDH) is of the most encountered neurosurgical cases, predominantly in older individuals. Surgical drainage remains the mainstay, yet is