Artery of Percheron occlusion

One uncommon type of ischemic stroke is occlusion of the artery of Percheron (AOP) leading to infarction of the paramedian thalami and mesencephalon.

Artery of Percheron (AOP) occlusion is a rare cause of ischemic stroke characterized by bilateral para-median thalamic infarcts. It usually presents with altered mental status, hyper-somnolence, and ocular movement disorders with associated hemiplegia or hemisensory loss.

There are several variants of thalamic blood supply, and identifying the potential presence and infarction of an AOP is important in the diagnosis and treatment of ischemic strokes affecting the thalami and mesencephalon, especially because of the unusual and variable presentation of these forms of ischemic strokes.

An elderly patient was found unconscious at home. CT of the head without contrast was unremarkable, while CT angiography of the head and neck revealed a subocclusive thrombus on the pre communicating (P1) segment of the left posterior cerebral artery (PCA). MRI brain revealed bilateral regions of diffusion restriction in the paramedian thalami and bilateral medial mesencephalon. Initial angiography confirmed the presence of a subocclusive thrombus in the P1 segment of the left PCA. Thrombectomy was performed achieving recanalization of the left PCA and reperfusion of bilateral thalami via a visualized artery of Percheron. Postoperatively, the patient was kept on a daily dose of 325 mg of aspirin. The patient did not improve neurologically. A follow-up MRI brain showed diffusion restriction in the left occipital lobe and petechial hemorrhages in the bilateral thalami. The family eventually opted for palliative measures, and the patient expired on day 14 of admission due to acute respiratory failure from palliative extubating [1].

A 58-year-old woman with an AOP infarct and indicates the importance of recognizing an AOP infarct early despite its clinical variations in order to treat the stroke in a timely fashion. This short review also includes a discussion of imaging modalities in such cases and clinical differential diagnoses to consider with management strategies [2].

A case of cardio-embolic AOP infarction in a 72-year-old man with sepsis and new-onset atrial fibrillation. Early diagnosis is challenging, but diffuse-weighted magnetic resonance imaging demonstrates the lesion in the acute setting. Anticoagulation therapy was started and patient's mental status gradually improved [3].

1)
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2)
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3)
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