

Case	(090) Artery of percheron infarction
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CASE PRESENTATION

A 68 year-old woman with multiple sclerosis stable since 2013, with no other relevant medical history, was rushed to emergency department after she was found unconscious with Glasgow score 7/15. Immediately, the stroke code protocol was activated, including a simple cranial CT scan, supra-aortic and Willis polygon angiography-CT and a neuroperfusion study.

Initial CT and angiography-CT were interpreted as normal (so we do not attach images), while the neuroperfusion study, showed a delay in the Tmax with a decrease in cerebral blood volume in both thalami and mesencephalon, in relation to established ischemia.

Due to these findings, the patient was treated with iv fibrinolysis and 24h later a control CT was performed, in which we can see bilateral and symmetrycal thalamic hypodensity with extension to the ventral side of the mesencephalon, compatible with subacute infarction.

DISCUSSION

This case illustrates an acute infarction in the territory of the Percheron artery. Artery of Percheron (AOP) is an uncommon anatomic variant, in which a single, unpaired thalamoperforating artery trunk arises from segment P1 of one of the posterior cerebral artery supplying bilateral medial thalami, with variable contribution to the rostral midbrain.

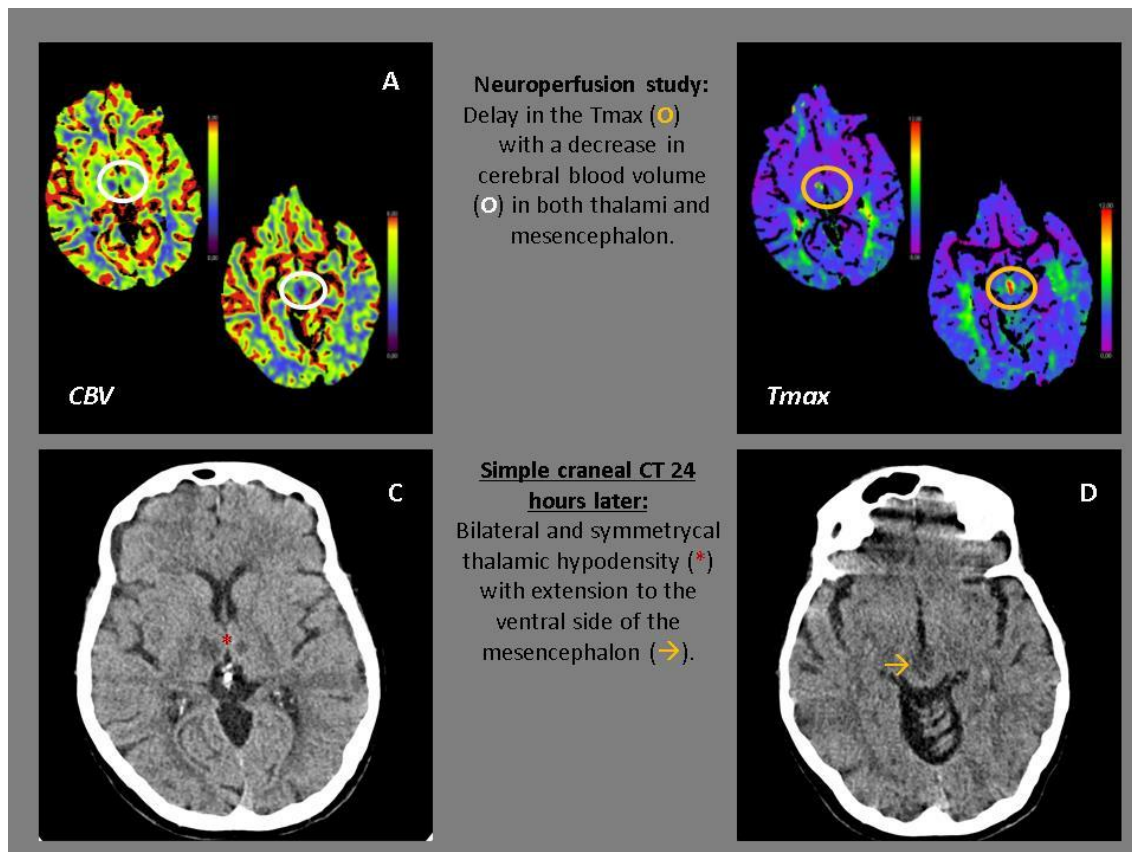
Occlusion of AOP results in a characteristic pattern of ischemia involving paramedian thalami with or without mesencephalic infarction. Although bilateral thalamic strokes are extremely rare, when this occurs the occlusion of artery of Percheron is the cause in 4 to 35% of cases.

Clinically it presents with mental state disturbances, hypersomnolence, aphasia/dysarthria, amnesia and ocular movement disorders. Early diagnosis of artery of Percheron infarction can be challenging because it is infrequent and early computed tomography may be negative, so that, it is important to be aware of AOP infarction to properly diagnose and to institute appropriate and timely treatment, such as intravenous thrombolysis and endovascular treatment.

The imaging differential diagnoses for AOP infarction include the "top of the basilar" syndrome, deep cerebral venous thrombosis, tumors and metabolic-toxic processes. The prognosis is subject to the extent of infarction but considered relatively good with regard to mortality and permanent deficits.

CONCLUSION

Artery of Percheron occlusion is a rare cause of ischemic stroke characterized by bilateral paramedian thalamic infarcts, with or without mesencephalic infarction. Awareness of the clinical and neuroimaging features of this stroke syndrome is essential for timely diagnosis and appropriate management.



BIBLIOGRAPHY

- Lamot U, Ribaric I, Popovic KS. Artery of Percheron infarction: review of literature with a case report. *Radio Oncol* 2015 Jun; 49(2): 141-146.
- Vinod KV, Kaaviya R, Arpira B. Artery of Percheron Infarction. *Ann Neurosci*. 2016 Jul; 23(2): 124-126.