



BMH Medical Journal 2015;2(2):53-54 **Interesting Image**

## Persistent Trigeminal Artery

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### Abstract:

Trigeminal artery is the commonest of the four primitive anastomoses between the carotid and vertebrobasilar system that may rarely persist in adults, with an angiographic incidence of 0.1 - 0.6%. We present the CT and MR angiograms of a patient who presented with a minor stroke and was detected to have this anomaly and briefly discuss the significance.

**Keywords:** Persistent Trigeminal Artery

A 41-year-old man with a history of diabetes mellitus was admitted with sudden onset of left sided upper motor neuron facial palsy. MR imaging of the brain showed an acute infarct in the right frontal opercular region, and the MR angiogram showed a persistent trigeminal artery (PTA) on the left side, which was later confirmed with a CT angiogram (**Figures 1 and 2**, Arrows).

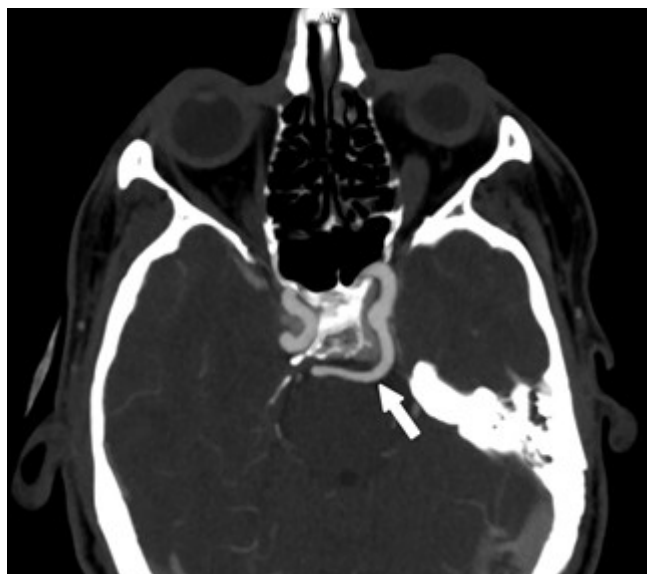


Figure 1



Figure 2

Trigeminal artery is the commonest of the four primitive anastomoses between the carotid and vertebrobasilar system that may rarely persist in adults, with an angiographic incidence of 0.1 - 0.6%. The other such anastomosis are the persistent otic, hypoglossal, and proatlantal intersegmental arteries. [1,2] They originate from the primitive ICA by 5th week of gestational age, and are named according to the neighbouring structures. They supply the proximal segment of hindbrain and normally start to regress by the 6th week, with the development of the vertebrobasilar system. In adults, they are most often found incidentally on angiography. Aneurysms may develop at the junction with the basilar artery. Close anatomical relationship of PTA with oculomotor, abducens, and trochlear nerves may explain case of ophthalmoparesis reported in the presence of PTA. In the setting of carotid bifurcation disease, vertebral arterial steal may occur, resulting in watershed infarcts. Knowledge of PTA existence is also useful before surgical intervention in carotid arterial system or sellar-parasellar surgery as unnoticed presence of PTA may result in disastrous outcomes during surgery. In our patient, the PTA seems to be an incidental finding unrelated to the symptomatic infarction.

## References

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