Teaching NeuroImages: Pseudopathologic brain parenchymal enhancement due to vascular compression in parotid tumor

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Figure 1 CT angiography

Coronal (A) and axial (B, C) CT angiography done by right side antecubital vein injection reveals jugular and cervical veins reflux (blue arrows) reaching the parotid tumor (orange arrow), with opacification of carotid and vertebral arteries (red arrows) and enhancement of intracranial compartment (yellow arrow). Also note hemithyroid contrast reflux (green arrow).

A 74-year-old man with a history of invasive right parotid gland adenocarcinoma presented with acute onset left hemiparesis. CT angiography showed abnormal cervical and intracranial vascular reflux with enhancement of right middle cerebral artery territory (figure 1). Vascular anomalies were suspected but digital subtraction angiography was normal. There was spontaneous resolution of the symptoms and a follow-up CT showed normalization of the imaging findings (figure 2). Pseudopathological brain parenchymal enhancement has been described rarely, usually as an

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Figure 2 Follow-up CT

Axial CT with contrast done by left side vein injection shows normal brain opacification (A) and right parotid tumor (orange arrows) involving the right internal carotid artery (red arrows) and no discernible right jugular vein (B). Note normal opacification of left side carotid artery (red arrows) and jugular vein (blue arrow).

incidental finding in asymptomatic patients, and mainly related to venous compression, development of collateral vessels, and incompetent venous valves.^{1,2}

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Disclosure

B.C.A. Teixeira, M. Cioni, D. Bertholdo, L.O.M. Coelho, and D.L. Escuissato report no relevant disclosures. Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures.

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Name	Location	Contribution
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