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# Bilateral acute thalamic infarctions following basilar artery dissection: an uncommon cause of thalamic hyperintensity on magnetic resonance imaging

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A 65-year-old woman was brought to the radiology department with vertical gaze palsy and coma. T2-weighted magnetic resonance imaging showed areas with symmetrical high signal intensity in the bilaterally paramedian thalamus. Diffusion-weighted imaging revealed significant diffusion restriction, with reduced apparent diffusion coefficient values in these areas (Figure 1a). Time of flight magnetic resonance angiography showed dissection of the basilar artery tip (Figure 1b). Based on the clinical findings and imaging studies, the patient was diagnosed with bilateral acute thalamic infarcts secondary to the occlusion of the thalamic midbrain perforators.

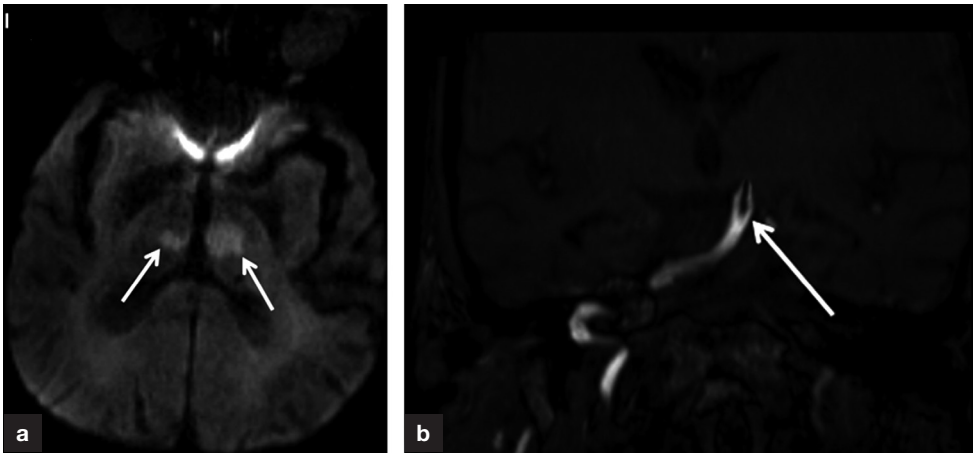


**Figure 1.** a. Diffusion-weighted imaging shows significant diffusion restriction (arrows) in the bilaterally paramedian thalamus. b. In time of flight magnetic resonance angiography, maximum intensity projection (MIP) images clearly reveal dissection (arrow) of the basilar artery tip.

Although dissection of the basilar artery is very rare, it can result in bilateral symmetric thalamic infarct as in this case. Many vascular and non-vascular aetiologies should be considered in the differential diagnosis of a bilateral thalamic infarct. Magnetic resonance angiography and diffusion-weighted imaging are sensitive imaging techniques to determine the aetiology of a thalamic infarct (Taydas et al, 2022).

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Taydas O, Ogul Y, Ogul H. Association with clinic risk factors of Percheron artery infarction and magnetic resonance imaging involvement patterns. Acta Neurol Belg. 2022;122(2):411–415. https://doi.org/10.1007/s13760-021-01697-z

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