

Artery of Percheron Infarction

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Abstract-

Artery of Percheron (AOP) is small perforating arteries supplying paramedian thalamus and mid-brain. The incidence of infarction is rare. We presented a 62-year-old man found conscious drowsy for 4 days. MRI revealed bilateral thalamic and midbrain infarction due to AOP occlusion.

Key words: artery of percheron, infarction

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INTRODUCTION

Main Text

A 62-year-old man with coronary heart disease and had regular medication control from local physician. He was found conscious fluctuation for 4 days, and was fall with left facial contusion in the bathroom, then became un-arousal after dinner. There were only some old lacunar infarctions in bilateral middle cerebral artery territories in the initial brain computer tomography (CT) in the emergency department. Magnetic resonance image (MRI) revealed bilateral thalamic and midbrain infarction (Figure 1) suggesting due to artery of Percheron (AOP) occlusion.

AOP is an uncommon anatomic variant of the small perforating arteries supplying bilateral paramedian thalamus and mid-brain. The incidence of AOP infarction is rare (varied from 0.1 to 2%) in all ischemic strokes, and 4-18% in thalamic infarction⁽¹⁾. Most of the AOP infarc-

tion is due to small vessel occlusion or cardiac embolism. Typical MRI shows bilateral thalamus infarction with or without mid-brain involvement, and good patency of the vertebra-basilar system on magnetic reso-

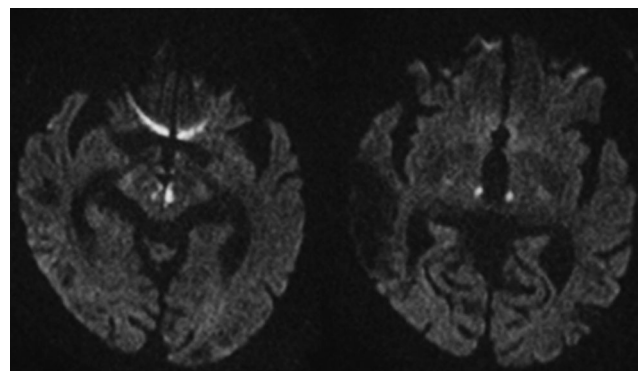


Figure 1. Diffusion weighted imaging (DWI) of brain showed symmetrical diffusion restricted lesions at bilateral paramedian rostral midbrain and thalamus, indicating artery of Percheron infarction.

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nance angiography^(1,2). However, unilateral involvement of thalamic AOP is not uncommon and may be overlooked. Four different patterns of AOP infarction was proposed based on the involved location of thalamus and midbrain. Changes of consciousness, physiologic status, and memory impairment due to bilateral thalamic involvement, and vertical gaze palsy due to the disruption of rostral interstitial medial longitudinal fasciculus in mid brain. Although most of the patient with AOP infarction will have a good prognosis after appropriate treatment, a thin-section and coronal diffusion weighted imaging (DWI) of thalamus to brain stem is indicated for

patients with subtle lesions and without acute lesion on CT.

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