

## **A case of unilateral thalamic infarction presenting as vertical gaze palsy**

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Introduction: Vertical gaze palsy is usually associated with lesions of the the posterior commissure, the interstitial nucleus of Cajal, and the rostral interstitial nucleus of the medial longitudinal fasciculus. Vertical gaze palsy due to paramedian thalamic infarction has rarely been reported. We describe a patient presenting as vertical gaze palsy due to unilateral thalamic infarction. Case: A 76-year-old woman visited to neurology department with sudden onset of dizziness and vertical diplopia. She was on treatment for hypertension and diabetes for 15 years. At admission, blood pressure was 160/110 mmHg, heart rate was 88 / min, respiratory rate was 20 / min, and body temperature was 37 ° C. There was no abnormal finding in the physical examination. On neurological examination the size of the pupil was 3.0 mm on the right side and 3.5 mm on the left side. His visual field and acuity were normal. There was no strabismus or spontaneous nystagmus at the primary position. Vertical eye movements showed bilateral upward and downward gaze paralysis (Fig. 1). Horizontal and vertical vestibuloocular reflex was normal. There were no other cranial nerve abnormalities. Motor, sensory function and cerebellar function tests were normal. The deep tendon reflex was normal and there was no pathological reflex. On admission, magnetic resonance examination revealed an infarct in the right medial thalamus (Fig. 2). She was treated with antiplatelet agents. Three months later, bilateral vertical gaze paralysis completely improved. Conclusion: Vertical gaze palsy with unilateral thalamic lesion may be presumed to be caused by interruption of the frontobulbar fibers in the medial thalamus.