Case Report

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# A Rare Case Report on Post Stroke Vertical Gaze Palsy

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## Abstract

Vertical gaze palsy is mainly a manifestation of midbrain lesions. We report the case of a 56-year-old man who presented to our facility with vertical gaze palsy and on investigation thalamic infarct was documented on MRI brain. The etiology of infarct was small vessel disease due to hypertension and diabetes after excluding other causes for the manifestations.

**Keywords:** Infarct, Thalamus, Gaze palsy.

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## Introduction

Vertical gaze palsy is documented in the lesions of the mesencephalic rostral interstitial nucleus of the medial longitudinal fasciculus, the interstitial nucleus of Cajal, the posterior commissure and the peri-aqueductal gray matter.[1] A single unilateral lesion, near the midline, may interrupt the pathways involved in vertical gaze just before and after they decussate, inducing an anatomically unilateral, but functionally bilateral, lesion.[2] Most common cause is vascular, like in our case systemic diseases affecting small vessels led to the infarct in the thalamus

## Case Report

A 56-year-old male presented in eye outpatient department with complaints of double vision from one week. There was history of mild headache from last one month. There was history of hypertension and diabetes from last five years. There was no history of trauma, surgery or any drug intake. On ocular examination, visual acuity was 6/6 in both the eyes. Pupillary reactions were normal in both the eyes. The extraocular movements were restricted superiorly thus, there was upward gaze palsy (Figure 1). The anterior segment and posterior segment examination was normal in both the eyes. Magnetic resonance imaging (MRI) brain was done which showed thalamic infarct. Blood investigations were normal. Rest of the systemic examination was normal. The etiology of stroke was thought to be due to small vessel disease secondary to uncontrolled hypertension. Treatment with aspirin, statins was started and tight hypertension and glycemic control was advised to the patient.

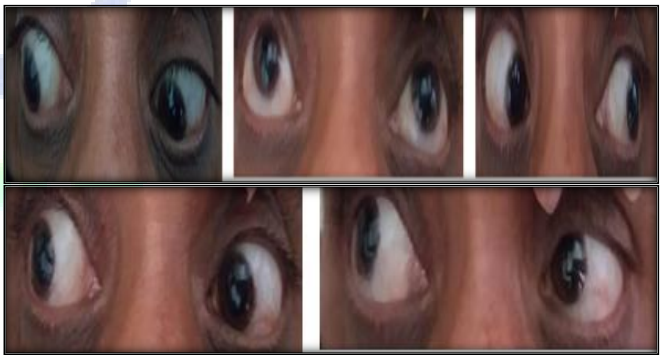

**Figure 1: showing gaze palsy**

## Discussion

Here we report a case of thalamic infarct manifesting as upward gaze palsy. The supranuclear pathways involved in vertical gaze are not well understood. Interruption of supranuclear fibers as they traverse the medial thalamus en route to the pretectal and prerubral areas could possibly lead to vertical gaze paresis. The medial thalamus is supplied by perforating branches arising from the basilar communicating artery and posterior cerebral arteries. The midbrain can be spared in some cases because the superior and inferior paramedian mesencephalic arteries arise separately from each other from the basilar communicating artery.[3]

## Conclusion

There is a possible role of the thalamus as a vertical gaze control center. Ocular manifestation can point to the etiology and possible location of the lesion

## References


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