

# **“PEERING AT THE TIP OF THE NOSE” SIGN ASSOCIATED WITH HEAD TILT DUE TO THALAMIC HEMORRHAGE**

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## **INTRODUCTION**

Tonic inward and downward deviation of the eyes was described patients with thalamic hemorrhage, and brainstem hemorrhage extending into the midbrain (1,2,3). Affected patients appear to be “peering at the tip of the nose”. We observed this ocular finding associated with vertical gaze palsy and head tilt due to thalamic hemorrhage extending midbrain .

## **CASE REPORT**

A 75 year old, right handed woman with hypertension developed sudden left hemiplegia. Neurologic examination revealed dysarthria, left hemiplegia , left hemihypostesia and extensor rigidity of the left leg. In the primary position, her eyes were dysconjugate tonically deviated downward and inward.(Figure 1) She had complete horizontal and vertical gaze palsy on voluntary saccadic and pursuit eye movements. The eyes fixed on horizontal and vertical with doll’s eye maneuvers. The pupils were equal at 2.5 mm and reactive to the light. Her head and neck were turned to the left. There was no ptosis, nystagmus, or skew deviation. Magnetic resonance imaging (MRI) of the brain revealed hemorrhage right thalamus extending midbrain. (Figure 2) . One month later, the patient showed severe horizontal and vertical gaze paresis.

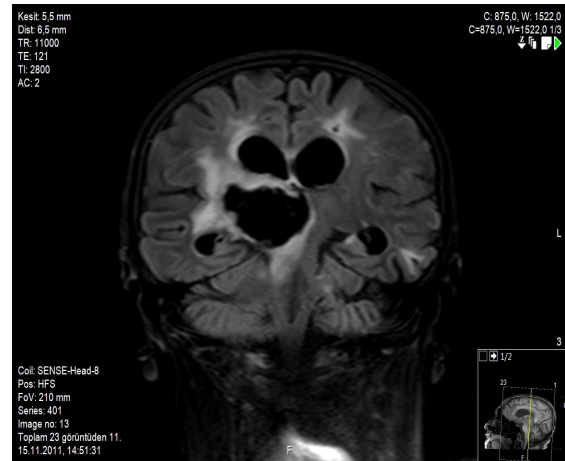


Figure 1 and 2

## **DISCUSSION**

The descending cortico- oculomotor pathways for convergence pass through the paramedian thalamus and exerts an inhibitory influence upon the contralateral premotor vergence neurons in the midbrain, which then project to the ipsilateral medial rectus subnucleus of the oculomotor nuclei. Damage to cortico- oculomotor pathways having an inhibitory effect on the convergence neurons or ischaemia of the divergence neurons in the midbrain could result in a sustained discharge of medial rectus neurons.

This patient showed bilateral esotropia resulting from right thalamic hematoma extending the midbrain. The left inward deviation may be explained by an injury resulting the right thalamic hematoma to descending supranuclear fibers for convergence before decussation. The right inward deviation may be explained by an injury resulting the right midbrain lesion to the descending supranuclear fibers for convergence after decussation.

In this patient, forced downward deviation and vertical gaze palsy were likely due to involvement of the rostral interstitial medial longitudinal fasciculus, the interstitial nucleus of cajal (INC) and the nucleus of the posterior commissure system which projects its axons, through the medial longitudinal fasciculus, to the oculomotor complex .

It may be assumed that the unilateral thalamic lesion indicates simultaneous hemorrhage of the paramedian rostral midbrain lesion involving the right interstitial nucleus of Cajal probably caused leftward head tilt in our patient.