



Figure. CT image of the head reveals a right thalamic hemorrhage with intraventricular extension. Marked left gaze deviation is apparent in the orientation of the ocular globes and lenses bilaterally, and ventriculostomy catheters are present in both lateral ventricles.

Wrong-way eyes with thalamic hemorrhage

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An 85-year-old woman with a history of hypertension was found unresponsive in her home. On arrival in the emergency department, she was obtunded with left-gaze deviation and left-sided weakness. Initial head CT revealed a right thalamic hemorrhage with intraventricular extension and early hydrocephalus, requiring ventriculostomy placement. Follow-up CT (figure) showed this hemorrhage and, in the same cross-sectional image, revealed marked left deviation of her ocular globes and lenses.

Following supratentorial infarction or hemorrhage, there is often conjugate gaze deviation toward the side of the lesion due to injury to the descending supranuclear ocular motor pathways. However, thalamic hemorrhage (and rarely large lobar hemorrhage) can present with gaze deviation away from the side of the lesion, so-called "wrong-way eyes."¹ Proposed mechanisms explaining this observation include compression of the mesencephalon affecting crossed frontopontine fibers, irritative effects on the intralaminar thalamic nuclei, or an interhemispheric smooth pursuit imbalance.²

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