

# Thalamic Hemiataxia

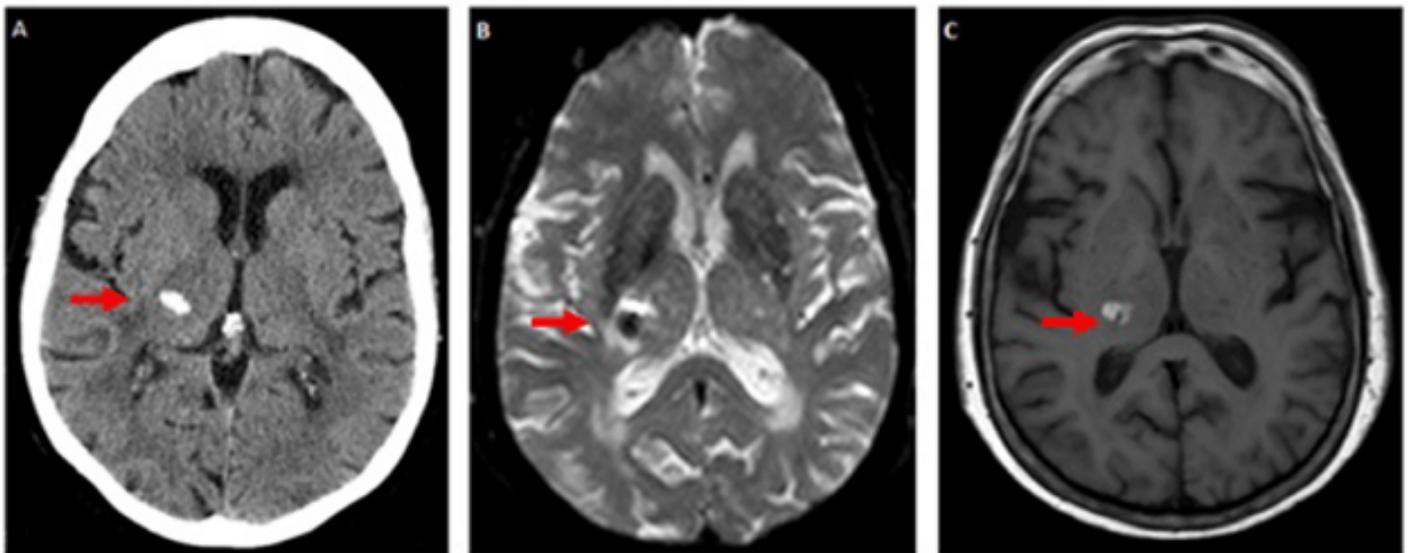
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## DESCRIPTION

A 75-year-old woman presented with acute onset of unbalance and impaired coordination in her left limbs with normal sensations. Neurologic examination showed dysmetria at her left extremities, mild dysdiadochokinesia to her left hand with apparent intact vibration and position senses. Her gait was wide-based and ataxic, and Romberg sign was negative, but she had a tendency to fall to the left side (Supporting information, video). Brain computerized tomography (CT) evidenced a small hemorrhagic lesion to the right

thalamus (Figure 1, Panel A), localized at the right lateral thalamus by the diffusion-weighted (DW) and T1 Magnetic Resonance Imaging (MRI) (Figure 1, Panels B-C). Somatosensory evoked potentials showed reduced amplitude of the right N20. Transcranial magnetic stimulation revealed a defective cerebellar-brain inhibition over the right motor cortex suggesting an impairment of the cerebello-thalamo-cortical pathway (Kikuchi, Mochizuki, Moriya et al., 2012). Cerebellar hemiataxia is rarely caused by a lesion in the controlateral thalamus affecting the cerebellar-thalamo-cortical pathway (Perren et al., 2005; Schmahmann, 2003).



**Figure 1.** Panel A. CT imaging evidenced a hemorrhagic lesion to the right thalamus. Panels B-C. DW and T1 MRI confirmed a hemorrhagic lesion to the right lateral thalamus.

## SUPPORTING INFORMATION

*Video.* Thalamic hemiataxia. Neurologic examination showed dysmetria at the left extremities, mild dysdiadochokinesia to the left hand, wide-based and ataxic gait with a tendency to fall to the left side.

## REFERENCES

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- Perren, F., Clarke, S., & Bogousslavsky, J. (2005). The syndrome of combined polar and paramedian thalamic infarction. *Archives of neurology*, *62*(8), 1212-6.
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