Isolated and prolonged loss of time orientation

In 1996, a 33-year-old man was admitted for a sudden somnolence, and was diagnosed with bilateral medial thalamic infarction (figure 1). Although his consciousness returned after a week, he presented a severe isolated impairment of time orientation, which has continued for more than 13 years. His episodic memories after the stroke were registered without time information (see appendix e-1 and figure e-1 on the Neurology Web site at www.neurology.org). The bilateral thalamic MRI lesions merged in the mediodorsal nucleus,1 and FDG-PET in 2004 showed severe hypometabolism in the posterior cingulate cortex and milder hypometabolism in the anterior cingulate. This case suggests that thalamic projection to the cingulate2 participates in the processing of time information.

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Disclosure: Dr. Lee, Dr. Chu, and Dr. Kim report no disclosures. Dr. Roh serves as an Associate Editor for Laboratory Investigation and the Journal of Alzheimer’s Disease.

Author contributions: Statistical analysis was conducted by Dr. Soon-Tae Lee.

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Supplemental data at www.neurology.org

Figure 1 Brain images

MRI shows medial thalamic lesions [A]. Statistical parametric map (SPM) of FDG-PET revealed hypometabolism in the cingulate cortex, especially in the posterior part [B]. The core lesions were merged in the mediodorsal nucleus [C]. Lpo — lateropolaris; MD — mediodorsal; Voe — ventro-oralis externus; Voi — ventro-oralis intermedius.

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