

## Impaired Smooth Pursuit Eye Movement in Transient Global Amnesia

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**Background and Purpose.** In transient global amnesia (TGA), selective impairment of episodic memory is assumed to occur due to alteration in the neuronal network between the hippocampus and parietooccipital cortices that also include a hub for smooth pursuit (SP) eye movements. This study aims to determine whether SP is impaired during TGA, and to seek anatomical and functional linkage between the oculomotor and memory systems. **Methods.** Within a median 1.0 day of TGA, horizontal SP was evaluated in 145 patients with a target moving at the peak velocities of 10°/s and 20°/s. Average SP gains of patients were compared with those of the age-matched controls. **Results.** The patients with TGA showed lower SP gains in either direction at both peak target velocities. While the normal controls showed symmetric SP between the rightward and leftward direction, the TGA patients showed lower gains of SP during rightward than leftward regardless of bilaterality or side of the lesions. **Conclusions.** The cortical regions processing the visual motion information appeared to be affected during or soon after the amnestic episode of TGA, more in the right hemisphere. Disturbed processing of dynamic visual information may be related to impaired spatial orientation observed in TGA.