Left Fornical Crus Injury and Verbal Memory Impairment in a Patient with Head Trauma

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A 28-year-old man who had suffered a traffic accident underwent conservative management for diffuse axonal injury and intracerebral hemorrhage in the left temporal lobe. Brain MRI (3 months after onset; fig. 1) showed a leukomalactic lesion in the corpus callosum and an old hemorrhage at the left temporal lobe and pons. The Memory Assessment Scale score for verbal memory (86: 18th percentile) was significantly decreased compared with that of visual memory (113: 81th percentile). Diffusion tensor tractography for fornix (fig. 1) showed a disruption of the left fornical crus. The selective verbal memory impairment of this patient seemed to be mainly ascribed to the left fornical crus injury.

Acknowledgement

This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (KRF-2008-314-E00173).

Suggested Reading

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Fig. 1. T₂-weighted brain MR images (3 months after onset) show a focal leukomalactic lesion at the corpus callosum (red arrow), and an old hemorrhage at the pons (yellow arrow) and left temporal lobe (green arrow). Diffusion tensor tractography for fornix of the patient show disruption at the left crus (arrow) compared with the intact crus of 4 age- and sex-matched normal controls (4 men, mean age 28.25 years, range 28–29).