

Oral apraxia due to injury of the corticofugal tract from secondary motor area in a stroke patient

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Objectives

No study has reported that the relation of the Oral apraxia (OA) and injury of the corticofugal tracts (CFTs) in stroke patients using Diffusion tensor tractography (DTT). We report on a stroke patient who showed OA due to injury of the CFT from the secondary motor area.

Methods

A 56-year-old male patient presented with severe dysarthria at the onset of a striatocapsular infarct in left hemisphere. He showed that paralysis on right face, reduced range of motion of the jaw and teeth, reduced range of motion and weakness of lips, and weakness and motion limitation of tongue. Diffusion tensor imaging data were acquired at one week after onset. On DTT, the integrity of the CBT and CFT from the supplementary motor area (SMA) was well-preserved in both hemispheres, however tearing and narrowing of the CFT from the dorsal premotor cortex (dPMC) at the subcortical white matter were observed in left hemispheres

Conclusions

Using DTT, we found that injury of the CFT from the secondary motor area in stroke patients with OA. Therefore, we believe that our results suggest the necessity of evaluation of the CBT and CFTs from the secondary motor area for stroke patients with dysarthria.

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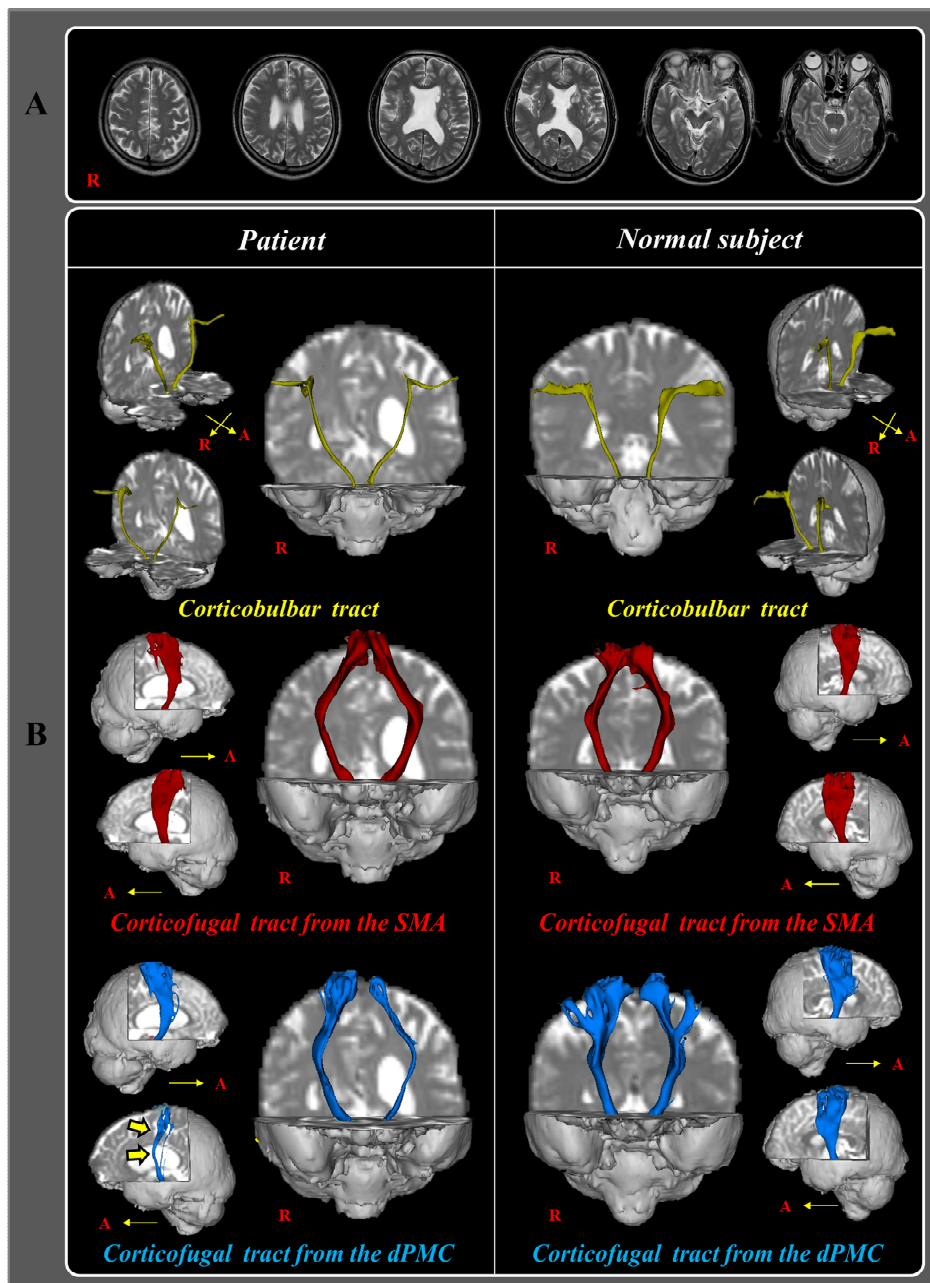


Fig. 1. A. T2-weighted brain MR images at a week after onset show leukomalatic lesions in the left striatocapsular region. B. On one-week diffusion tensor tractography, the integrity of the corticobulbar tract and corticofugal tract from the supplementary motor area is preserved in both hemispheres. However, narrowing and tearing (arrow) is observed in the right corticofugal tract from the dorsal premotor cortex (dPMC) compared with a normal subject (56-year old male).