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Traumatic trigeminal neuropathy after whiplash injury: a case report

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Objectives

Recent studies have demonstrated brain injuries following whiplash. Many studies have reported clinical evidence, including facial pain, which suggests trigeminal neuropathy after whiplash. Herein, we report on a patient who showed post-whiplash traumatic trigeminal neuropathy, which was demonstrated by using diffusion tensor tractography (DTT).

Case Description

A 51-year old female suffered an indirect head trauma resulting from flexion-hyperextension injury after being hit from behind by a moving vehicle while her vehicle was stopping at an intersection. At approximately 30 minutes after onset, she began to sense a headache in the left frontal area and sensory changes in the left facial area, signs that intensified with the passage of time. At seven days after onset, she visited the rehabilitation department of our university hospital and described the characteristics and severity of pain as follows: headache on the left frontal area including the forehead with intermittent squeezing and numbness sensations. Her visual analog scale (VAS) pain score was 6 with her left cheek having a continuous, dull, swelling sensation (VAS score: 1). On neurological examination, she revealed mild allodynia without hyperalgesia or somatosensory change on the head, cheek, tongue, and oral cavity. On DTT, the left trigeminal nerve showed discontinuation in the middle portion compared to that of the right trigeminal nerve.

Conclusions

By using DTT, we demonstrated traumatic trigeminal neuropathy in a patient with whiplash. We suggest that DTT would be a useful tool for the detection of traumatic trigeminal neuropathy in patients who show clinical features of trigeminal neuropathy following whiplash.

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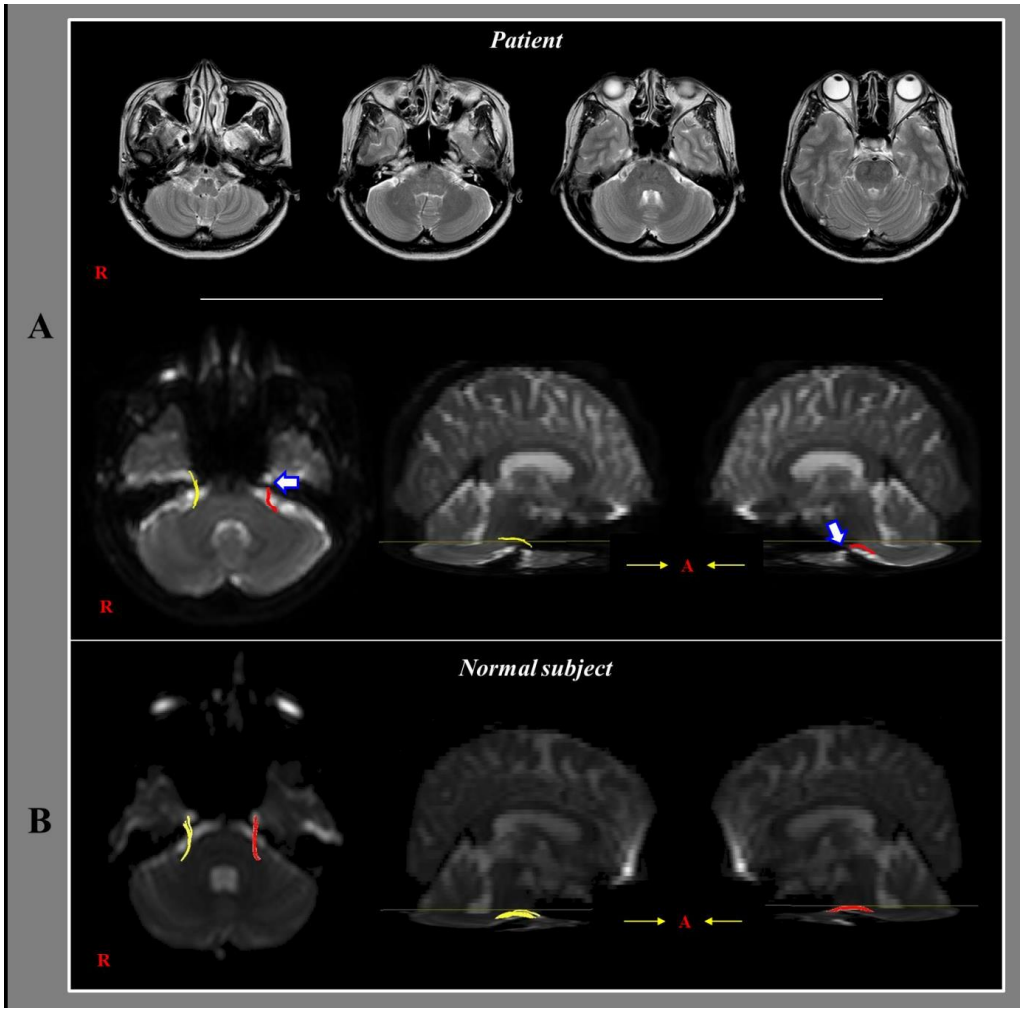

Fig. A: T2-weighted brain magnetic resonance (MR) images obtained seven days after whiplash onset show no abnormality (upper row). Results of diffusion tensor tractography: the left trigeminal nerve is discontinued (arrow) (lower row). B: Results of diffusion tensor tractography for a control subject (53-year old female).