Eur Neurol 2009;62:256
DOI: 10.1159/000232932**Isolated Trochlear Nerve Palsy due to a Contusion at the Trochlear Nerve Exit Zone***Toshitaka Kawai, Reiko Tsuda, Naoki Saji, Makoto Tadano, Hirotaka Shimizu, Yasushi Kita*

Department of Neurology, Hyogo Brain and Heart Centre at Himeji, Himeji, Japan

Key Words

Trochlear nerve palsy • Contusional lesion • Vertical diplopia

A 52-year-old man struck his occiput. A few hours later, he became aware of vertical diplopia. Brain CT disclosed no intracranial hemorrhage; however, MRI demonstrated a lesion at the right side of the surface of the midbrain tegmentum (fig. 1a–c). Isolated right trochlear nerve palsy was revealed by Hess screen test (fig. 1d). His symptom disappeared during a 1-month follow-up.

Trochlear nerve palsy following head trauma is not rare, but detection of contusional lesion by neuroimaging has been possible in a few cases. It is speculated that traumatic force caused the trochlear nerve exit zone to impact on the tentorium in this patient.

Toshitaka Kawai

520 Saisho-ko, Himeji 670-0981 (Japan)

Tel. +81 792 93 3131, Fax +81 792 95 8199, E-Mail tkawai@hbhc.jp

Fig. 1. **a** Axial diffusion-weighted MRI 4 days after the injury showed a contusional lesion at the right side of the surface of the midbrain tegmentum. The lesion is more clearly visible on the axial (**b**) and coronal (**c**) fluid-attenuated inversion recovery images. **d** Hess screen test revealed right trochlear nerve palsy.