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NEUROLOGICAL PICTURE

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An internuclear ophthalmoplegia with ipsilateral abduction deficit: half and half syndrome

A 16-year-old white boy was assaulted with fists and boots. In the emergency room, he was ataxic and had occipital scalp lacerations. Examination of both eyes showed that visual acuity was 20/20, with a normal pupils. Ocular motility showed mild left hypertropia and a moderate to severe exotropia in all cardinal positions of gaze (greatest in right gaze; fig 1). The near reaction and convergence effort could overcome the adduction deficit in the left eye consistent with a pontine internuclear ophthalmoplegia. On right gaze, he had a severe underaction of adduction in the left eye associated with an abducting dissociated horizontal nystagmus in the right eye. He also had a moderate underaction of abduction in the left eye (fig 1). On upgaze, both eyes were found to have developed vertical gaze-evoked nystagmus. The ocular motility examination suggested a left internuclear ophthalmoplegia with a partial left sixth nerve palsy.¹ The fundus examination was normal. However, conjugate torsion was

Figure 2 Motility photograph showing that convergence can partially overcome the adduction deficit.

observed towards the hypotropic right eye, consistent with a skew deviation as the cause of the left hypertropia.² Magnetic resonance imaging showed a focal haemorrhagic lesion in the floor of the aqueduct in the region of the dorsal pons (fig 3).

We postulate that the dorsal pontine haemorrhage involved the left medial

Figure 3 Axial fluid attenuation inversion recovery magnetic resonance scan showing focal haemorrhagic lesion (arrow) in the floor of the aqueduct in the region of the dorsal pons.

longitudinal fasciculus and the sixth nerve fasciculus (sparing the sixth nerve nucleus). To our knowledge, this is the first clinicrodiological report in the literature of a haemorrhagic internuclear ophthalmoplegia ("half" of a contralateral horizontal gaze palsy) and an ipsilateral sixth cranial nerve fascicular involvement ("half" of an ipsilateral horizontal gaze palsy) with sparing of the sixth nerve nucleus (the "half and half" syndrome).

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Figure 1 Motility photographs showing the abduction (left panel, centre row) and adduction deficit (right panel, centre row) in the left eye.