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A pontomedullary lesion of aberrant pyramidal tract with ipsilateral central facial paresis

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DESCRIPTION

The patient, a 76-year-old man, developed central facial paresis on the left side (figure 1). Eleven days after the onset of his symptoms, MRI showed a faint area of signal hyperintensity in the left dorsal pontomedullary junction on T1-weighted imaging along with an area of signal hypointensity in the interior of the brainstem and an area of signal hyperintensity in the margin on T2-weighted imaging (figure 2A–C). After 2 months, facial paresis disappeared almost completely and the lesion was smaller (figure 2D). Based on these MRI findings, ipsilateral central facial paresis resulting from a microhaemorrhage at a cavernous angioma was diagnosed.

A unilateral lesion of the ventromedial brainstem generally exhibits a clinical picture of crossed paresis consisting of

central facial paresis contralateral to the lesion.¹ On the other hand, with a unilateral lesion of the dorsolateral brainstem concurrent ipsilateral central facial paresis has been reported.¹ Some facial corticobulbar tract fibres are thought to leave the corticospinal tract at the pontomedullary junction as an aberrant pyramidal tract.^{1–3} Most of the fibres of the aberrant pyramidal tract descend to the level of the ventromedial upper medulla and then decussate and ascend in the dorsolateral medulla to reach the contralateral facial nucleus of the lower pons.^{1 2} Our dorsolateral lesion was thought to be affecting the ascending fibres of the aberrant pyramidal tract after their decussation causing ipsilateral facial paresia. Ipsilateral central facial weakness with pontomedullary lesions is due to the ascending fibres of the aberrant pyramidal tract.

Figure 1 The patient was lucid with no bilateral differences in forehead wrinkling. However, muscular weakness was observed in the left orbicularis oculi and orbicularis oris muscles.

Figure 2 An axial T1-weighted image (A), an axial T2-weighted image (B) and a mid-sagittal T2-weighted image (C) show signal changes and swelling (arrows) at the pontomedullary junction. (D) An axial T2-weighted image shows a reduced lesion (arrow) 2 months after the onset of symptoms.

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Competing interests None.

Patient consent Obtained.

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