A rare combination of facial and hypoglossal nerve palsies following post-traumatic internal carotid artery dissection

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DESCRIPTION

We report a case of a 17-year-old girl who presented, 1 month after being attacked in a chain snatching incident, with neck trauma, and reports of dysarthria and left-sided facial weakness. The patient neglected initial symptoms of headache and left-sided neck pain, and did not seek medical advice at the time. On examination, she had left facial weakness, absent left forehead wrinkles and deviation of the tongue to the left on protrusion, suggesting left peripheral facial and hypoglossal nerve palsy (figures 1 and 2). All other cranial nerve examination was normal. MR angiography of

the neck and brain revealed abrupt occlusion of left internal carotid artery (figure 3), suggesting dissection with thrombosis of left internal carotid artery (ICA). MRI also revealed hyperintensity of the left side of the tongue suggesting denervation oedema due to hypoglossal nerve palsy (figure 4).

Cranial nerve palsy in ICA dissection occurs in 3–12% of all patients, mostly involving the lower cranial nerves (IX to XII).¹ Isolated VII or isolated XII cranial nerve palsy is rare but has been reported.^{2–3} However, a combination of both has not been previously known. Our patient had VII and XII cranial nerve palsies. Compression or stretching of the nerve by the expanded artery or interruption of the nutrient vessels supplying the nerve may be the likely cause of the palsy. The ascending pharyngeal artery and the middle meningeal artery supplying the XII and VII nerves, respectively, arise from the external carotid artery, which may be directly affected by dissection or by being compressed by the expanding dissected ICA.⁴

Figure 1 Left facial palsy.

Figure 2 Deviation of tongue to the left suggesting left hypoglossal palsy.

Figure 3 MR angiography showing occlusion of left internal carotid artery.

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Figure 4 MRI showing hyperintensity of the left side of the tongue suggesting denervation oedema.

Learning points

- ▶ Dissection of the extracranial internal carotid artery is increasingly being recognised as a cause of ischaemia, particularly in young patients.
- ▶ Internal carotid artery dissection should be considered as a differential in hypoglossal nerve palsy.
- ▶ Compression of the nerve or interruption of the blood supply to the nerve, seems to be the likely cause of palsy.

Contributors VDN examined the patient and prepared the manuscript. JVS interpreted the MRI of the patient and contributed in diagnosing the condition.

Competing interests None.

Patient consent Obtained.

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