Spontaneous internal carotid artery dissection presenting as hypoglossal nerve palsy

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Spontaneous dissection of the cervical internal carotid artery (sICAD) is typically associated with a clinical triad consisting of focal cerebral ischaemic symptoms, Horner’s syndrome and mostly ipsilateral headache. Lower cranial nerve palsies as the only sign of a sICAD seem to be uncommon and rare. We report two cases and give a review of the literature, showing that this clinical presentation is not that uncommon. Cranial nerve palsy is reported in 8–16% of sICAD; the lower cranial nerves IX–XII are most commonly affected, in particular the hypoglossal nerve, being affected in approximately 5%. The exact number of isolated cranial nerve palsies as a result of sICAD is unknown but probably underestimated. In patients with diagnosed sICAD a value of less than 5% has been described in the literature. Typically patients with cranial nerve palsies lack cerebral ischaemic lesions. In these patients lower cranial nerve palsies are probably the result of compression by an enlarging internal carotid artery (ICA) due to a subadventitial haematoma, whereas cerebral ischaemic lesions result from a subintimal haematoma, leading to thromboembolism.

The diagnosis should be made by combining different techniques, primarily the application of magnetic resonance imaging. Treatment should follow the recent guidelines of cervical artery dissection, which in general means initial anticoagulation for three months. In case of spontaneous restitution after three months the oral anticoagulation is stopped. Otherwise prolonged anticoagulation for additional three months may be followed by aspirin, individually adapted anticoagulation. We recommend thinking of a sICAD as a possible differential diagnosis in patients with isolated lower cranial nerve palsies.

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