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Collet-Sicard's syndrome as a result of jugular vein thrombosis

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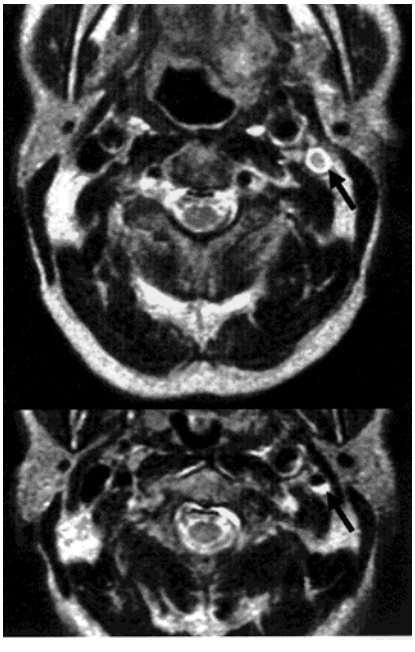
Sirs: A recent study [3] reported five cases of isolated cranial nerve palsies caused by thrombosis of the transverse or sigmoid sinuses. In addition to these interesting findings, we present a case with the syndrome of the posterior lacerocondylar area due to a thrombosis of the jugular vein.

A 60-year-old man was admitted to our Department or Neurology after 1 week of left-sided severe temporal, migraine-like headache with flashes of light and within 3 days progressive dysphonia and dysphagia. Neurological examination revealed left cranial nerve lesions (IX, X, XI, XII) with reduced velopharyngeal elevation, lost gag reflex, decreased touch and pain sensation on the left side of the palate, immobility of the left vocal cord, paralysis and atrophy of the left sternocleidomastoid and trapezius muscles, and a tongue deviation to the left. No vascular risk factors or previous thrombotic episodes were reported. Lumbar puncture yielded a clear cerebrospinal fluid without cells and with a normal protein and glucose content. Results of blood analyses, especially all blood coagulation parameters, were within the normal range. Paraproteinaemic hyperviscosity (IgG-l light-chain type) was the only pathological finding. Cranial computed tomography showed no evidence of a space-occupying lesion in the area of the jugular foramen. Computed tomography of the neck, retropharyngeal space and chest radiography was normal. An ENT examination was completely normal. Cranial magnetic resonance imaging with and without contrast showed signal abnormality in the jugular bulb (Fig. 1A), which was thought to be compatible with the absence of blood flow in this vessel. Cerebral angiography of the left carotid artery demonstrated thrombosis of the left internal jugular vein (Fig. 1B).

After initiation of effective heparin treatment (partial thromboplastin times 2- to 2.5-fold normal) the patient recovered in a short time. The headache ceased spontaneously at the onset of the cranial nerve palsies. Six weeks after anticoagulation (2 weeks of heparin treatment, then oral anticoagulation with dicumarol, INR 2.0–3.0), the only remaining deficit was mild dysphonia. Cranial magnetic resonance imaging and magnetic resonance angiography showed almost complete reperfusion of the left jugular vein (Fig. 1A, lower panel). Anticoagulation was carried out for 10 weeks. Follow-up after 12 weeks showed the patient to be free of any signs and symptoms.

Collet-Sicard syndrome consists of an unilateral deficit of the four lower cranial nerves, which is generally based on trauma or tumour of the skull base [2]. This report describes an unusual case of Collet-Sicard syndrome caused by jugular vein thrombosis. In the literature there are very few descriptions of cranial nerve palsies due to cerebral vein thrombosis. One reported patient had Villaret's syndrome (involvement of the four lower cranial nerves and cervical sympathetic fibres) caused by jugular vein thrombosis secondary to previous mastoiditis. There is only one report [4] of Collet-Sicard syndrome, which was probably due to a thrombosis of the transverse sinus; however, a tumour infiltration of the vessel could not completely be excluded. In our case no tumour

A



B

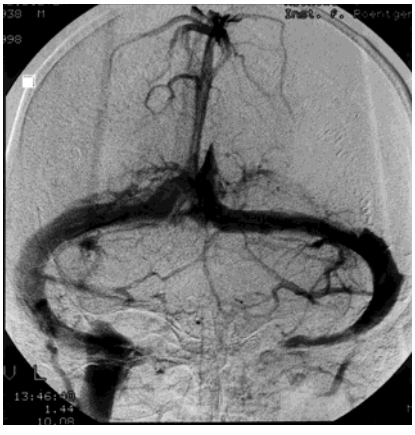


Fig. 1 **A** MRI of the brain, transversal T2-weighted image. The hyperintensive signal in the left jugular bulb (*arrow*) indicates missing blood flow in this vessel. *Lower panel* shows almost completely restored perfusion of the left jugular vein after 10 weeks of anticoagulation. **B** Cerebral angiography. The venous phase shows an occlusion of the left internal jugular vein

or clotting disorder was detected, but a paraproteinaemic hyperviscosity may have induced thrombosis. We believe that, on the basis of the close anatomical relationship, venous congestion and ischaemia is the cause of the cranial nerve lesions (IX, X, XI, XII) in this case of jugular vein thrombosis. Our case demonstrates that, in addition to a thrombosis of the transverse/sigmoid sinuses, an isolated thrombosis of the jugular vein should be included in the differential diagnosis of unilateral cranial nerve lesions.

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