Vernet's syndrome

**Jugular foramen syndrome**, or Vernet's syndrome is characterized by the paresis of 9th–11th (with or without 12th) cranial nerves together.

In contrast to the majority of classic brainstem syndromes, the interpretation of Schmidt's syndrome (ipsilateral palsy of the IX, X, XI, and XII cranial nerves with contralateral hemiparesis) and Vernet's syndrome (ipsilateral palsy of the IX, X, and XI nerves with contralateral hemiparesis) is controversial. They are sometimes addressed as crossed brainstem syndromes but also as syndromes due to multiple cranial nerve lesions without contralateral hemiparesis. In this study, the historic descriptions and recent publications about Schmidt's and Vernet's syndromes were reviewed and critically analysed. We conclude that historic descriptions and later publications describe exclusively patients with extracerebral lesions of multiple cranial nerves. “Central” syndromes of Schmidt and Vernet caused by brainstem lesion appear not to exist. An extremely extensive lesion explaining these hypothetical unilateral brainstem syndromes is theoretically possible but, however, was apparently never observed in any of the known unilateral brainstem diseases.

**Symptoms**

Unilateral paralysis of the palate, vocal cords, sternocleidomastoid, trapezius, with loss of taste in the posterior 1/3 tongue, anesthesia of the soft palate, larynx and pharynx.

Symptoms of this syndrome are consequences of this paresis. As such, in an affected patient, you may find:

- dysphonia/hoarseness
- soft palate dropping
- deviation of the uvula towards the normal side
- dysphagia
- loss of sensory function from the posterior 1/3 of the tongue
- decrease in the parotid gland secretion
- loss of gag reflex
- sternocleidomastoid and trapezius muscles paresis

**Etiology**

A variety of neoplasms, vascular insults, infections, and trauma have been reported to cause JFS.
The causes of Vernet syndrome are primary tumors such as Glomus jugulare tumors (most frequently), meningioma, vestibular schwannoma, cerebellopontine angle metastases, inflammation such as meningitis and malignant otitis externa, and sarcoidosis, Guillain-Barre syndrome. Trauma.

Cholesteatoma (very rare).

Obstruction of the jugular foramen due to bone diseases.

Varicella-zoster virus.

Giant cell arteritis.

Internal jugular vein thrombosis.

After carotid endarterectomy.

Large mycotic aneurysm of the extracranial internal carotid artery after acute otitis media.

Systemic erythematous lupus.

Case reports

A case of a giant cervical osteophyte resulting in compression of the jugular foramen. A 74-year-old man who presented with progressive dysphagia and dysarthria was found to have right-sided tongue deviation, left palatal droop, and hypophonia. His dysphagia had progressed to the point that he had lost 25 kg over a 4-month period, necessitating a gastrostomy to maintain adequate nutrition. He underwent extensive workup for his dysphagia with several normal radiographic studies. Ultimately, CT scanning and postcontrast MRI revealed a posterior osteophyte arising from the C1-2 joint space and projecting into the right jugular foramen. This resulted in a jugular foramen syndrome in addition to delayed filling of the patient's right internal jugular vein distal to the osteophyte. Although rare, a posterior cervical osteophyte should be considered in cases of jugular foramen syndrome.

References

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