PICTORIAL MEDICINE

Hypoglossal nerve palsy

The hypoglossal nerve receives only brief mention in most textbooks and compared with other cranial nerve palsies, 12th nerve palsy is much less common. We report a 52-year-old woman who presented with right-sided headaches for over a year. It was only on examination that we discovered she had an abnormal tongue. She had wasting and fasciculations on the right side of her tongue, which was deviated to the right side, due to the unopposed action of the unaffected left side (Fig 1). The rest of the neurological examination was unremarkable. On further questioning she said she had no problems with speech, mastication, or swallowing. Magnetic resonance imaging confirmed a well-defined mass lesion encroaching on the right side of the foramen magnum and the hypoglossal canal, with displacement of the right medulla and the inferior cerebellar hemisphere (Figs 2, 3). The radiological characteristics suggested bone dysplasia. She was referred for craniectomy and excision but at the time of writing, the patient remained undecided whether to have surgery.

Discussion

Tumours account for over half of the reported cases of hypoglossal nerve palsy. The most common are metastatic carcinomas, chordomas, nasopharyngeal carcinomas, gliomas, and acoustic neuromas.[1,2] In the only large series, 100 cases reported by Keane,[1] the next most common category was trauma—usually penetrating injuries. Uncommon causes include multiple sclerosis and idiopathic isolated hypoglossal nerve palsy, which is a diagnosis of exclusion. Acute onset of pain with tongue weakness points to dissection of the extracranial internal carotid artery, a medical emergency.[3] Bilateral tongue wasting is usually due to neurological disorders such as motor neurone disease and Kennedy's disease.[4,5] Even with bilateral involvement it is uncommon for patients to complain specifically about tongue function. Occasionally we see psychogenic or hysterical 12th nerve palsy in which the tongue may be deviated to the side opposite to that of the limb paralysis.

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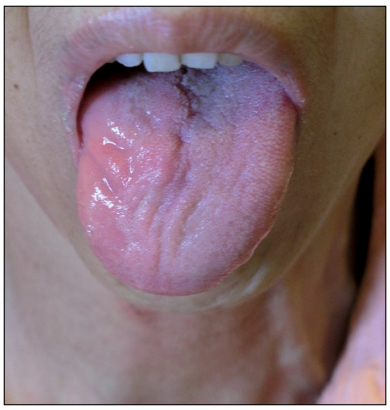

FIG 1. Clinical photo: wasted tongue on right side with deviation

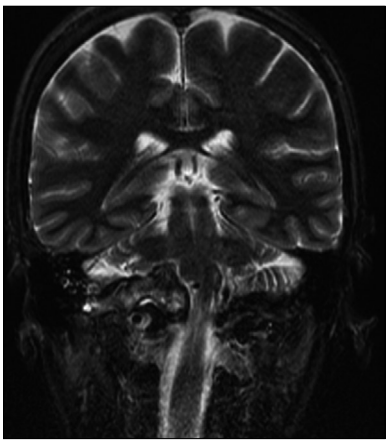

FIG 2. T1-weighted axial magnetic resonance image of the brain, revealing a mass lesion in the posterior fossa

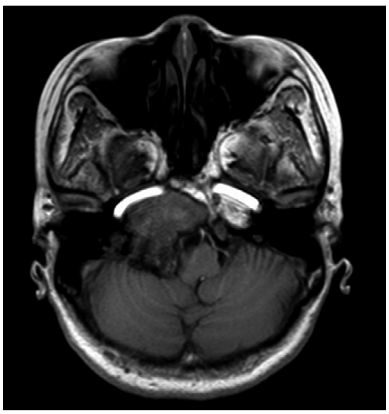

FIG 3. T2-weighted coronal magnetic resonance image of the brain showing an expansile bone mass involving the right side of the basisphenoid and basiocciput, right petrous apex and occipital bone

References

1. Keane JR. Twelfth-nerve palsy. Analysis of 100 cases. Arch Neurol 1996;53:561-6.
2. Boban M, Brinar VV, Habek M, Rados M. Isolated hypoglossal nerve palsy: a diagnostic challenge. Eur Neurol 2007;58:177-81.
3. Hafkamp HC, Van Der Goten A, Manni JJ. Unilateral spontaneous dissection of the internal carotid artery presenting as hypoglossal nerve palsy. Eur Arch Otorhinolaryngol 2004;261:405-8.
4. Yetimalar Y, Seçil Y, Inceoglu AK, Eren S, Başoğlu M. Unusual primary manifestations of multiple sclerosis. N Z Med J 2008;121:47-59.
5. Hui AC, Cheung PT, Tang AS, Fu M, Wong L, Kay R; Hong Kong Neuromuscular Disease Study Group. Clinical and electrophysiological features in Chinese patients with Kennedy's disease. Clin Neurol Neurosurg 2004;106:309-12.