

Doomed tongue twisters

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DESCRIPTION

Occurrence of hypoglossal nerve palsy (HNP) accompanied with other cranial nerve palsies is not an uncommon finding. However, isolated HNP is a rare finding and represents a diagnostic challenge.¹

A woman in her late 70 s was referred to the neurology department due to sudden onset of dysarthria. She had right breast cancer in 2003 and underwent mastectomy, local radiotherapy and adjuvant chemotherapy for regional metastasis. On neurological examination her tongue was hemiatrophy and deviated to the left side. The rest of the neurological examination was unremarkable. Brain MRI showed a subtle enhancing lesion involving the left occipital condyle with the destruction of the petrous apex and clivus (figure 1A). The supraclavicular lymph node biopsy showed a metastatic adenocarcinoma (clinically breast ductal carcinoma).

In another case, a woman in her mid 60 s visited a hospital due to sudden onset of dysarthria. Medical history was unremarkable. Neurological examination showed atrophy with left-sided tongue deviation. Brain MRI revealed an enhancing lesion involving the left occipital condyle and clivus (figure 1B). The biopsy of regional enlarged lymph node showed the poorly differentiated metastatic squamous cell carcinoma.

The hypoglossal nerve is a pure motor nerve responsible for the motor supply to the tongue. Vascular, inflammatory, traumatic or space-occupying lesions can affect the hypoglossal nerve anywhere in its course.^{1 2} Isolated HNP is a rare finding because of its proximity to other important anatomical structures throughout its pathway. HNP, when isolated, may be the first sign of a serious underlying disease and a neoplastic aetiology should be excluded.^{2 3}

Learning points

- ▶ Isolated hypoglossal nerve palsy is a rare finding because of its proximity to other important anatomical structures throughout its pathway.
- ▶ Vascular, inflammatory, traumatic or space-occupying lesions can affect a hypoglossal nerve anywhere in its course.
- ▶ Isolated hypoglossal nerve palsy may be the first sign of a serious underlying disease and a neoplastic aetiology should be excluded.

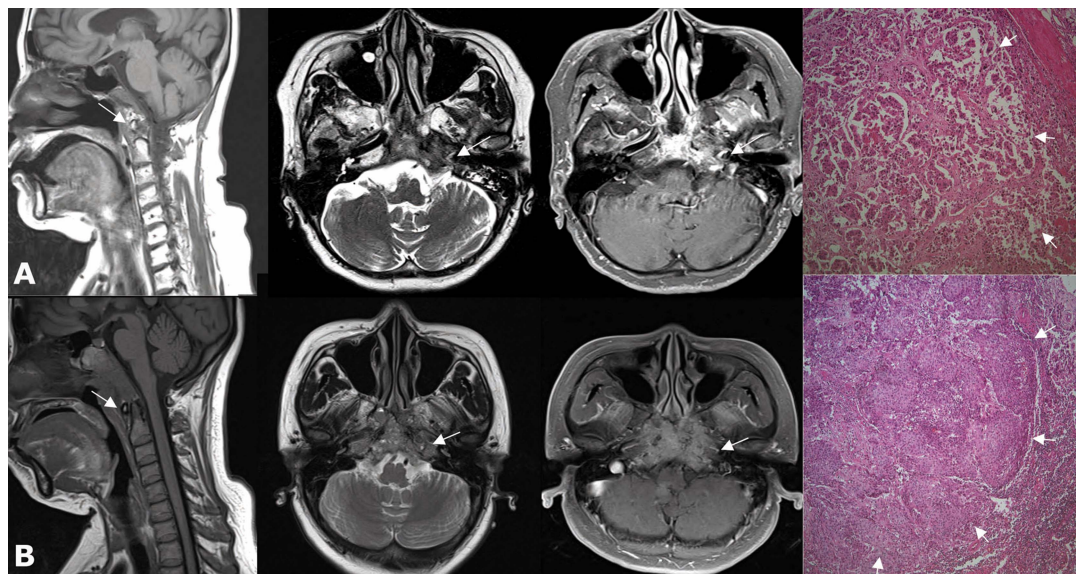


Figure 1 (A) Brain MRI showing bone marrow signal change with enhancing lesion located beneath the left occipital condyle and hypoglossal canal aperture (arrow). Pathologic findings of supraclavicular lymph node demonstrating metastatic adenocarcinoma showing gland forming tumour cells with cellular pleomorphism (arrows, H&E stain $\times 100$). (B) Brain MRI revealing bone marrow signal change with expansive formation beneath the base of the skull located between the jugular foramen and foramen magnum and destroying the left occipital condyle and clivus (arrow). Pathologic findings of lymph node demonstrating metastatic squamous cell carcinoma showing diffuse irregular sheet with keratin (arrows, H&E stain $\times 100$).



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