Trigeminal Schwannoma Presenting as Atypical Trigeminal Neuralgia and Masseter Atrophy

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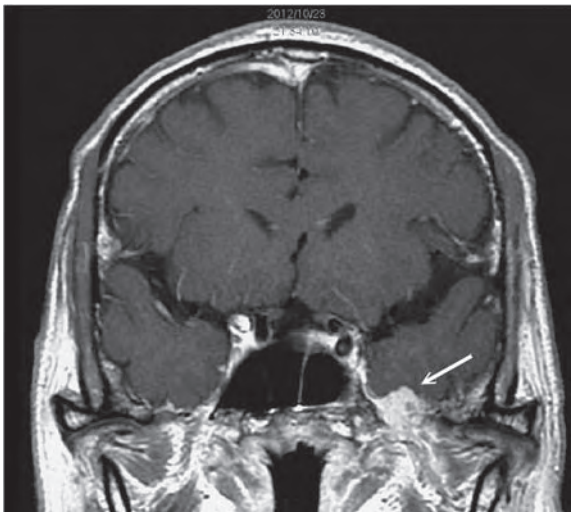

Figure 1. Coronal contrast-enhanced T1-weighted brain MRI. An enhanced mass (arrow) extended through the left foramen ovale.

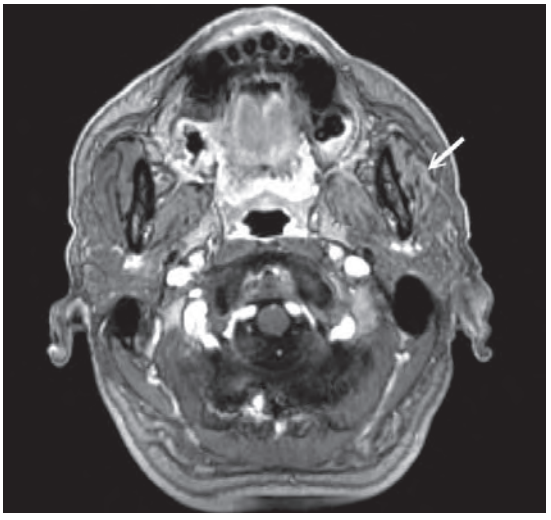

Figure 2. Atrophy of the left masseter muscle (arrow) in comparison with the contralateral side.

A 58-year-old man presented with progressive paresthesia and constant pain at left temporal and anterior auricular area for four months, who characterized the pain as sharp and lancinating in moderate to severe degree, with radiation to lower face, and aggravated while chewing. Two months later, he noticed progressive buccal muscle wasting. Neurologic examination (NE) showed sensory impairment in aforementioned area and masseter muscle atrophy. Needle electromyography (EMG) revealed active denervation changes in left temporalis and masseter muscles but normal patterns in facial nerve-innervated muscles. The NE and EMG findings indicated the lesion was at mandibular branch of left trigeminal nerve. However, the initial brain computer tomography and magnetic resonance imaging (MRI) scan did not reveal any correlated abnormality.

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Received October 4, 2013. Revised January 24, 2014.
Accepted March 17, 2014.

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A further thin-section (1.5mm) MRI focused on sella disclosed a 1.6*1.5*0.3 cm heterogeneous tumor at left paracavernous sinus and temporal floor with extracranial extension via the foramen ovale (Figure 1) and masseter muscle atrophy (Figure 2). The pathologic finding of this tumor was schwannoma.

Most trigeminal neuralgia (TN) patients are idiopathic but symptomatic may account for up to 15% of all cases[1]. Symptomatically, atypical TN differs from typical TN by more constant pain along with the episodic brief attacks, and usually correlates to a symptomatic cause [2]. Tumor is an important etiology of unilateral atypical TN with motor involvement [3].

A tumor related atypical TN with motor involvement often indicates a more peripheral lesion (ie. distal to the Meckel's cave), which might be overlooked by the routine brain image when the lesion is tiny. Under the circumstances, the image study should focus on sella and skull base.

In conclusion, atypical TN with motor involvement is rarely idiopathic, while tumor poses an etiological possibility. Thin-section MRI study focused on sella is required if the preliminary image study fails to demonstrate the lesion.

Acta Neurol Taiwan 2014;23:38-39

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