Intracranial extradural schwannoma of the 12th cranial nerve

Case illustration

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KEY WORDS • hypoglossal nerve • schwannoma • far-lateral approach

This 44-year-old man presented with gait unsteadiness and a positive Romberg sign. Magnetic resonance (MR) imaging revealed a heterogeneously enhancing mass extending from a widened left hypoglossal canal toward the midline to the fourth ventricle. The upper medulla oblongata appeared invaginated by the lesion, which followed the path of the hypoglossal nerve (Fig. 1).

The lesion was approached through a far-lateral craniotomy and a subtotal intracapsular removal was performed. Postoperatively, the patient did not suffer additional deficits. The tumor originated near the hypoglossal canal. Although exclusively extradural, it had grown intracranially, causing distortion of the medulla. Histological analysis revealed a schwannoma and confirmed that the capsule covering the tumor was indeed dura mater.

Hypoglossal nerve schwannomas that originate extradurally, but remain predominantly intracranial are unusual. Typically, schwannomas of the hypoglossal nerve originate intracranially and extend toward the hypoglossal foramen, enlarging and eroding the hypoglossal canal.1,2 They seldom extend extracranially toward the jugular foramen, carotid canal, or infratemporal fossa.3 Despite the fact that the lesion was growing exclusively intracranially, this tumor was extradural. There was little erosion of the hypoglossal foramen, but the exclusively extradural lesion had significantly displaced intracranial structures (Fig. 1). This unusual growth pattern might explain the lack of appreciable 12th cranial nerve deficits at presentation.

References