Lipoma of trigeminal nerve in a patient with severe trigeminal neuralgia

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Figure MRI

T1 coronal images show homogenous hyperintense lesion involving the right trigeminal nerve root (white arrows) in A and B and Meckel's cave (white arrow) in C as compared to normal left trigeminal nerve (black arrows) and Meckel's cave (yellow arrow). Axial T1 image also demonstrates the involvement of mandibular division in foramen ovale (white arrow) as compared to normal on left side (orange arrow) in D.

A 45-year-old man presented with severe spastic, lancinating facial pain typical of intractable trigeminal neuralgia in the right mandibular area. MRI revealed an elongated lesion involving the right trigeminal nerve with signal intensity equal to that of subcutaneous fat. The homogenous T1-weighted hyperintensity (figure, A–D) and intermediate signal intensity on T2-weighted images suggested a tissue-specific diagnosis of trigeminal nerve lipoma. The patient refused surgery and follow-up MRI 1 year later showed no interval change in the morphology and extension of the lesion.

DISCUSSION

Cerebellopontine angle (CPA) lipomas are rare,¹ and fatty infiltration of the trigeminal nerve giving rise to intraneural lipoma is even more uncommon. Intracranial lipomas are generally considered incidental findings on MRI and most patients remain asymptomatic. Symptoms that do occur in association with CPA lipoma usually mimic those associated with acoustic neuromas. Trigeminal nerve lipomas typically cause progressive focal neurologic symptoms due to involvement with nerve fascicles and adjacent neural structures. Trigeminal lipomas infiltrate the nerve fascicles² so that even partial surgical excision may result in neurologic deficit. MRI aids accurate localization and tissue characterization prior to surgical intervention,³ and also helps to differentiate the lipomatosis of nerve from similar T1-weighted hyperintense extraneural CPA lipoma. Limited surgery in the form of arachnoid adhesiolysis⁴ should be considered only if a patient has disabling neurologic symptoms.

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DISCLOSURES

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