-associated with hydrocephaus is detrimental and should be avoided. The role of ventricular dilatation and the impact of a rise in the intraventricular cerebrospinal fluid pressure in the presence of a large intracranial tumor need to be evaluated further.

D. P. Muzumdar, M. G. Bhatjiwale, A. Goel
Department of Neurosurgery, King Edward VII Memorial Hospital and Seth G. S. Medical College, Parel, Mumbai, India.
E-mail: dmuzumdar@hotmail.com

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Isolated foot weakness caused by a parasagittal metastatic parotid adenocarcinoma

Sir,

Although the most common cause of foot drop is a lesion of the fifth lumbar root, based upon the homuncular topography of the primary motor cortex, one would predict that a parasagittal cortical lesion might also cause isolated unilateral foot weakness. Surprisingly, a review of the neurological literature reveals a dearth of case reports documenting the existence of this entity. Additionally, the case reports describing primary parotid tumors metastasizing to the brain are few and far between. We describe here the case of a parasagittal metastatic parotid tumor that resulted in isolated foot weakness.

A 60-year-old man presented with left foot weakness of a month’s duration. The weakness was of gradual onset, limited to one foot, and was unaccompanied by pain or sensory loss. He had no history of trauma or other neurological symptoms (including sphincter disturbance) and no constitutional symptoms. He had had a right-sided facial mass for seven years for which he denied seeking formal medical treatment.

Physical examination revealed an immobile, non-tender subcutaneous right facial mass measuring 6.5 x 4.5 cm, overlying the parotid gland. The neurological exam revealed a right-sided lower motor neuron facial palsy. He had a left steppe gait and complete paralysis of the ankle and toes of the left foot: all flexors, extensors, evertors and invertors had 0/5 strength. There was no tremor, ataxia, or fasciculations. There was mild hypertonicity of the left quadriceps, with no evident atrophy. He had muscle stretch reflexes that were significant for two beats of ankle clonus on the left, with otherwise diffuse and symmetric 3+ hyperreflexia in all four limbs. The jaw jerk was absent, and there was no abnormal grasp response or other primitive reflex. Plantar reflexes were flexor bilaterally. Sensation was preserved throughout.

Aspiration biopsy of the subcutaneous facial mass was performed, and pathology revealed the lesion to be a poorly differentiated adenocarcinoma of the parotid gland. MRI of the brain with gadolinium revealed a right parasagittal ring-enhancing lesion, with mild surrounding edema. Since the lesion in the brain was single and presumably metastatic, it was resected. Pathology revealed it to be a poorly differentiated adenocarcinoma, with cytological features resembling those of the parotid specimen.

Two aspects of this case were unusual: first, the clinical presentation of isolated foot weakness from a parasagittal cortical lesion, and second, brain metastasis from a primary parotid tumor. The most common tumor type to cause distal foot weakness is parasagittal meningioma, with other reported lesions being astrocytomas, denuelinating plaques, and cranial trauma, however, the foot weakness in such cases is typically part of a constellation of signs that include some degree of hemiparesis and sensory changes as well as constitutional symptoms such as nausea and vomiting. Suspicion of upper motor neuron disease in such cases is roused by the presence of a positive Babinski sign labeled “spastic foot drop” by some. Symptoms or signs pointing to an intracerebral etiology, when present, are headache and papilledema. Although adenoid carcinoma metastasizing to the brain has been reported, brain metastases from parotid tumors are rare. There are two case reports of multiple brain metastases from adenoid cystic parotid carcinomas but these differed substantially from our case in cytopathology, pattern of metastasis (single versus multiple) and clinical sequelae. It has been hypothesized that in the rare cases that parotid tumors do metastasize intracranially, they do so by way of peri-neural or endoneural spread.
This is manifestly not the case here however, as the intracranial target of the metastasis was the motor cortex subserving the foot.

Anjan Chatterjee, Darren Orbach*
Department of Neurology, College of Physicians and Surgeons and *Departments of Neurology and Radiology, New York University Medical Center, New York NY USA.
E-mail: aac2009@columbia.edu

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