Hemiatrophy of the Denervated Tongue

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Clinical Image

A 69-year-old woman presented with a 4-year history of dysphagia, dysarthria, and muscle wasting of the left half of her tongue. There were no other orofacial symptoms. The patient had undergone left marginal resection of the mandible in combination with supraomohyoid neck dissection 6 years earlier for a malignant tumor of the left mandible. On physical examination, the left half of the tongue was atrophied and deviated to the left on protrusion (Figure 1). A computed tomographic scan showed low density with atrophy of the left side of the tongue indicating the development of fatty infiltration (Figure 2). There was no cervical lymphadenopathy. Positron emission computed tomographic scanning confirmed no tumor recurrence in the neck. Since the hypoglossal nerve (twelfth cranial nerve) supplies motor innervation to the muscles of the tongue, denervation caused by the damage to the hypoglossal nerve is manifest as hemiatrophy of the tongue.

Hypoglossal paralysis occurring after neck dissection for cervical malignancies suggests the likelihood not only of recurrence with involvement of the hypoglossal nerve but also of postoperative changes [1,2]. The cranial and cervical nerves are at high risk for injuries during neck dissection [3].

References