Glioma of the Tongue

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In 1922, Petrer et al. reported a case of heterotopic glioma. This tumor usually occurs in the head and neck region, most commonly in the nose. Although rare, gliomas also have been found on the tongue. A case is presented of a glioma found on the dorsum of the tongue; a discussion of this entity and a review of the literature follow.

CASE REPORT

A 3-year-old boy was seen with a painless mass on the dorsum of the right posterior third of the tongue. After a normal spontaneous vaginal delivery, the child had respiratory problems and feeding difficulties that required intensive care unit management for 1 week. No surgical intervention was required, and his respiratory and feeding problems resolved spontaneously. The tumor was a white, shiny, firm mass that measured 2 cm in length and 1.4 cm in width (Fig. 1). The child’s physical examination was otherwise unremarkable.

The mass was excised with a 2-mm margin under general anesthesia, and the wound was closed primarily. The patient’s postoperative course was uneventful.

PATHOLOGY

The specimen consisted of an irregularly shaped piece of tan and white tissue measuring 2.0 × 1.4 × 1.0 cm. The portion that included the white shiny mass measured 1.7 cm in diameter with several 1- to 2-mm papules at one aspect. Underlying this whitish lesion was an area of softer tan tissue that measured 1.4 × 0.4 cm. The histopathologic diagnosis of heterotopic glioma was made. The lesion consisted of irregular islands of glial tissue in the submucosa. The glial cells had the characteristic fibrillary eosinophilic cytoplasm of astrocytes (Fig. 2). They were diffusely immunoreactive for glial fibrillary acidic protein. Other neural elements were not observed.

DISCUSSION

A heterotopic glioma of the tongue is rare, with only a few cases reported in the literature. It may represent extracranial neural tissue that is displaced during embryogenesis, pluripotential embryonic remains in the tongue, or neural tissue remaining in the occipital somites that differentiate into the
tongue muscles. The latter theory has been suggested by Bras et al. as the most likely.

Most childhood lesions of the tongue are benign, and they commonly are either hemangiomas or lymphangiomas. However, the differential diagnosis for a dorsal lingual mass also includes lingual thyroid, teratoma, hamartoma, rhabdomyosarcoma, dermoid cysts, fibrosarcoma, neurofibroma, fibromyxoma, and glioma.

By histologic analysis, the lingual glioma can be differentiated from these other masses. This tumor consists of sheets of glial tissue with stellate cells that possess round to oval nuclei. All the other masses in the differential diagnosis lack glial tissue except for a teratoma; however, a teratoma is ruled out because of the absence of mesodermal or endodermal components in a glioma.

As in this patient, tongue masses may cause difficulty eating, difficulty talking, respiratory distress, or bleeding. Because the lingual glioma is thought to be a benign lesion, treatment consists of simple excision.

**SUMMARY**

A case of glioma of the tongue that was treated successfully by simple excision and repair is presented. It may represent neural tissue that remains in the occipital somites that differentiate into the tongue muscles. Histologically, it consists of sheets of glial tissue. The literature is reviewed, and the case is discussed.

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**REFERENCES**