Neurilemmoma in the Oral Cavity

by

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Abstract

A case of neurilemmoma at the ventral surface of the tongue was reported with a review of the literature.

Introduction

Tumors of neural tissue in the oral region are relatively rare [1-3]. Such tumors arise from the sheaths of peripheral nerves, the neuroglia and the nerve cells themselves. Tumors of the nerve sheath comprise neurilemmoma and neurofibroma. Tumors of the neuroglia, the gliomas, are found only in the central nervous system. Tumors of neurons, neuroblastoma and ganglioneuroma, occur in the ganglia of the sympathetic system and in the adrenal [4].

Neurilemmoma, also called schwannoma, is almost invariably a benign, encapsulated neoplasm. The present report describes a case of neurilemmoma in the light of a review of the literature.

Case report

A 14-year-old boy was referred by a dentist for diagnosis and treatment of a painless swelling at the ventral surface of the tongue. The patient had been aware of the lesion, and it had been found incidentally during a routine examination. The family and medical histories were not contributory, and the patient had no history of trauma to the tongue. On examination, a well-circumscribed, firm tumor was found on the right ventral surface of the tongue, approximately 1 cm posterior from the apex (Figs. 1 and 2). Although the tumor appeared as a smooth, slightly convex swelling beneath the mucosa, the overlying mucosa showed no surface changes. Since the tumor was firmer than a usual lipoma, a clinical diagnosis of neurilemmoma was made. Under infiltration anesthesia, an approximately 2-cm-long incision was made over the tumor, along with the midline of the tongue mucosa. The encapsulated tumor was easily freed from the surrounding tissue by blunt dissection. An oval and well circumscribed tumor (10 × 8 mm) was removed and immediately sent for pathological examination.
Macroscopically, the tumor was round, nodular, elastic soft and $1.0 \times 0.9 \times 0.8$ cm in size. At the cut surface, it was encapsulated, solid and mainly gray-white.

Microscopically, the tumor was composed of cells with elongated or spindle-shaped nuclei together with intercellular collagenous tissue, the cells and fibers often being arranged in a parallel manner, giving rise to the characteristic appearance that has been reported as regimentation of the nuclei, twisted rows or palisades (Fig. 3). A small amount of mucinous degeneration was also observed in the stroma.

Fig. 3 The classic histologic features of neurilemmoma such as palisaded nuclei are evident (H.E. $\times 100$)
Discussion

Tumors arising from peripheral nerves in the oral and paraoral tissues are not common. OBERMAN et al.\textsuperscript{[5]} reported forty-one patients with neurogenous tumors in the oral, head and neck area. Only eleven of these tumors were found in the oral cavity. KRAGH et al.\textsuperscript{[6]} also reported 143 extracranial neurilemmomas, finding only ten arising intraorally.

Although neurilemmoma occurs both in the soft tissues and in the mandible and maxilla, the tumor is mostly found in the soft tissues. HATZIOTIS et al.\textsuperscript{[1]} reported the site distribution of neurilemmoma among various soft tissues. The distribution was 59 in the tongue, 11 in the palate, 10 in the floor of the mouth, 9 in the buccal mucosa, 6 in the gingiva, 6 in the lip and 5 in the vestibular mucosa. CHERRICK et al.\textsuperscript{[2]} also reported 8 tumors in the tongue, 6 in the buccal mucosa, 3 in the floor of the mouth and 1 in the lip. The tongue is thus the commonest site among the soft tissues, and was the site of the tumor in the present case.

Neurilemmoma in soft tissue appears as a smooth, convex swelling beneath the mucosa, which is soft on palpation and is tender. There are few symptoms, other than those due to the size and location of the tumor. The main complaint is simply of a lump in the mouth, or swelling of the jaw with intraosseous tumor. However, there is usually no pain and the tumor generally shows slow growth.

Microscopically, neurilemmoma is classified as Antoni type A or Antoni type B. Antoni type A tissue consists of cells resembling fibrocytes together with intercellular collagenous tissue, the cells and fibers often being arranged in a parallel manner that gives rise to the very characteristic appearance that has been described as palisading or regimentation of the nuclei. However, in some cases, palisading is inconspicuous or even absent. Antoni type B tissue can be described as reticular, since it consists of a rather loose meshwork of fibrils enclosing microcysts, which sometimes coalesce to form macroscopic cysts. These two types of tissue are generally seen in most neurilemmomas, although some consist entirely of one or the other type. The present case is one of typical Antoni type A.

Neurilemmoma is a rather slowly growing tumor that does not recur if completely removed. Malignant change is very rare\textsuperscript{[5]}. Although the postoperative course in the present case was quite favorable, we intend to follow it up for several years.

References


