Schwannoma of the hard palate

V. Ashok Murthy · S. Ramaswamy · M. Sunita

Abstract Schwannoma or neurilemmomas are benign, slow-growing, usually solitary, encapsulated tumors. They originate from the schwann cells of the nerve sheath. Approximately 30–40% of head and neck tumors are schwannomas. Intraoral schwannomas constitute a mere 1%. Tongue is the commonest site of schwannomas intraorally. Here we report a rare case of a hard palate swelling which was histopathologically diagnosed as schwannoma. The lesion was completely excised intraorally.

Keywords Schwannomas · Hard palate

Introduction

Schwannoma or neurilemmomas are benign tumors of ectodermal origin derived from schwann cells of the nerve sheath. They are slow growing, solitary, encapsulated and found in peripheral nerves, where neurons are invested by schwann's sheath. These tumors are usually located in the soft tissues of the head and neck. 30–40% of all schwannomas are seen in the head and neck region. Intraoral schwannomas constitute a mere 1%. Tongue is the most common site for intraoral schwannomas. We report the case of a patient with schwannoma of the hard palate, which was excised intraorally.

Case report

A 28-year-old woman presented with a swelling in the anterior half of the hard palate, to the left of the midline. She had noticed the swelling since the past four months. It was slow growing. The swelling used to occasionally bleed on applying pressure with the tip of the tongue or the finger tip. There were no complaints of pain, irritation, sudden increase in size or any other mass/swelling in the neck or other parts of the body.

The family history was not significant. The individual, though from a rural background, had no history of chewing tobacco or betel nut.

On examination, the swelling was 1.5×1.5 cm in size, had a multinodular surface and the surface mucosa was similar to surrounding mucosa. There were no signs of ulceration or slough over the swelling. The margins were well-defined except on the lateral side (Fig. 1). It had a soft consistency. The mass was friable. A biopsy and other routine investigations were conducted.

Routine hemogram and other biochemical parameters were within normal limits. The biopsy revealed a schwannoma. The lesion was excised completely. The post-operative period was uneventful.

V. A. Murthy¹ · S. Ramaswamy² · M. Sunita²

¹Department of ENT and Head & Neck Surgery,

²Department of Pathology,
PESIMSR, Kuppam - 517 425,
Andhra Pradesh, India

V. A. Murthy (✉)

e-mail: ashokmurthy_army@yahoo.co.in

Fig. 1 Swelling on the hard palate

Discussion

Schwannomas or neurilemmomas are benign, slow growing, solitary, encapsulated tumors, which originate from the schwann cells of the nerve sheath. 30–40% of all schwannomas are seen in the head and neck region. Intraoral schwannomas constitute a mere 1%. Tongue is the commonest site for intraoral schwannomas. The other sites where this lesion occurs intraorally are hard palate, buccal mucosa, lip and the gingiva. Of these, 8–10% schwannomas become malignant.

The signs and symptoms of these tumors depends on the location. They usually are asymptomatic. If they occur on the base of the tongue or come in the way of breathing or swallowing, they might cause dyspnea or dysphagia. Otherwise, the presenting feature of an intraoral schwannoma is a tumor mass.

Histopathologically, the tumor tissue consists of Antoni A and Antoni B type cells. Type A tissue shows densely packed, elongated spindle cells, with a regular arrangement forming a palisading pattern. They are associated with delicate reticulin fibers and spindle-shaped nuclei. Between the rows there are fine cytoplasmic fibrils with acellular, eosinophilic masses called Verocay bodies (Fig. 2). Antoni B type tissue is less cellular and is formed by irregular arranged masses of elongated cells and fibers, similar to neurofibroma, with areas of cystic degeneration and edema. Immunohistochemistry study of schwannomas show an intense and uniform staining for S-100 protein, which is a marker for schwann cells. These cells also express vimentin, Lev 7 antigen and glial fibrillary acidic proteins.

Magnetic resonance imaging (MRI) is the investigation of choice compared to other imaging modalities. On MRI, a schwannoma is smooth and well demarcated. This tumor is isointense to muscle on T1-weighted images and homogeneously hyperintense on T2-weighted images.

Fig. 2 High power field histopathology of a patient with schwannoma of the hard palate

Fig. 3 Low power field histopathology of a patient with schwannoma of the hard palate

The differential diagnosis of hard palate schwannomas include malignant lesions such as squamous cell carcinomas, sarcomas; benign lesions such as granular cell tumors, salivary gland tumors, leiomyomas and other inflammatory lesions. Treatment involves complete surgical excision.

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