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Schwannoma of the Hard Palate

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Abstract: *Schwannomas are benign encapsulated slow- growing tumor that orignates from the Schwann cells of the peripheral nerve sheath. It usually occurs in the head and neck regions, however, its location in the oral cavity is rare. We report a case of schwanoma in the hard palate in a 46 year old with a history of swelling in the upper jaw region for the past 2 months. He has a history of diffciluty in swelling since then.*

Keywords: *Palate, neurilemmoma, oral cavity, schwannoma*

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I. Introduction

Schwannoma, also known as neurilemoma, neurinoma and Schwann cell tumor is a benign tumor that originates from perineural Schwann cells of the nerve sheath [1]. They are slow-growing, solitary and encapsulated. [2].It was first described in the literature in the year 1910 by Verocay [3], who described the first peripheral nerve tumor. Nevertheless, it was not until 1932 that the term "Schwannoma" was introduced by Masson [4]. Approximately 25-45% of the lesions occur in the head and neck region, however, intraoral lesions are rare [1].Most of the intraoral cases are found on the upper and lower side of the tongue and vestibule, being rare on the palate [5,6]. This tumor most commonly arise in the soft tissues but it can be also found in hard tissues. Intraosseous schwannomas are rare, but when they occur, the mandible is the most common site, particularly in the posterior areas of the body and ramus [5,6]. The etiology of schwannoma is unknown [1].The aim of this case report is to present a schwannoma of the palate which is an unusual location for intraoral tumors.

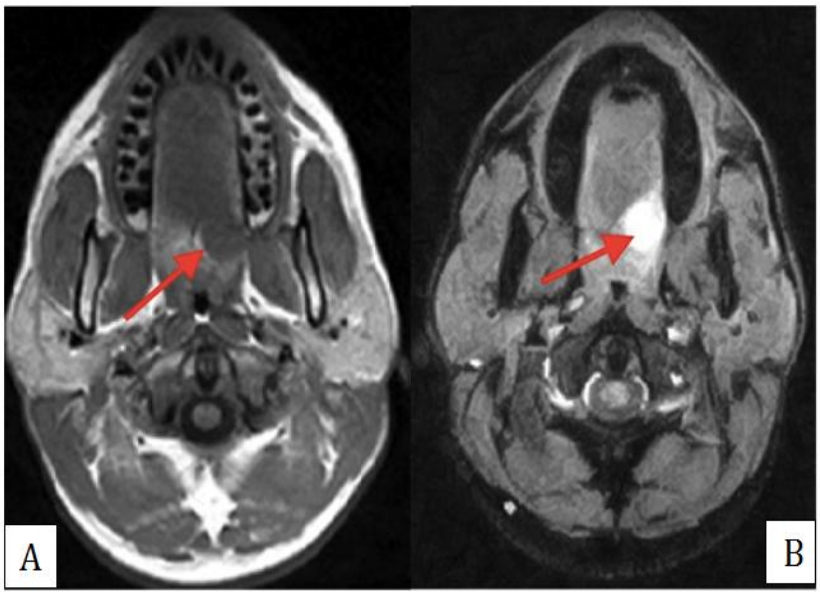
II. Case Report

A 46-year-old male patient came with complain of swelling in the upper jaw region for the past 2 months.He had history of difficulty in swallowing since then. On intraoral examination, there was a single swelling in the left soft palate region, circular in shape roughly about 3 x 3cm, extending from the mid palatine raphe medially upto the left maxillary tubercosity laterally. Surface of the swelling was ulcerated with no visible pulsation and well defined margins.On palpation, swelling was firm in consistency, non-compressible tender on palpation.Computed tomography (CT) was done for the patient [Figures 1A and 1B], which revealed an enhancing soft tissue density lesion noted in the anterior aspect of soft palate on the left side.

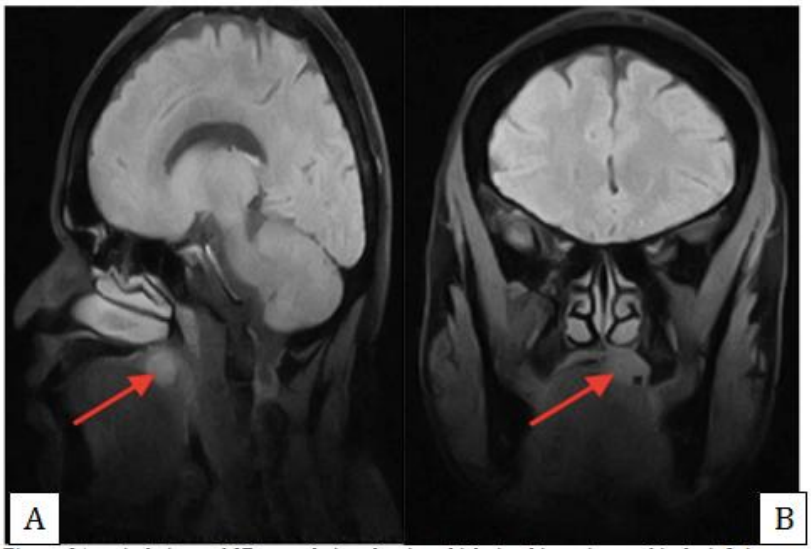
Fig 1A & 1B shows an enhancing soft tissue density noted in the anterior aspect of the soft palate

on the left side.

For further evaluation, Magnetic Resonance Imaging (MRI) was suggested which revealed a low signal intensity on T1W image and a heterogeneously enhancing high signal intensity on T2/FLAIR images, noted in the inferior aspect of the hard palate pushing the soft palate posteriorly on the left side with mild scalloping of left maxillary alveolus. [Figures 2A, 2B, 3A and 3B].



Figures 2A shows a low signal intensity and 2B showing a heterogeneously enhancing high signal intensity noted in the inferior aspect of the hard palate pushing the soft palate posteriorly on the left side



Figures 3A sagittal view and 3B coronal view showing a high signal intensity noted in the inferior aspect of the hard palate pushing the soft palate posteriorly on the left side

Histopathological examination revealed a connective tissue with nerve cells and areas of spindle cells with wavy nuclei, arranged in palisading pattern resemblingAntoni A type was seen. There were areas showing disorderly arranged cells resembling Antoni B type. Diffuse mild chronic inflammatory cell infiltrate is seen. Definitive diagnosis was acquired with histopathology.

III. Discussion

Schwannoma, also known as neurilemoma, neurinoma and Schwann cell tumor is a benign tumor that originates from perineural Schwann cells of the nerve sheath [1].Schwannoma can occur at any age but they most commonly occur in the second and third decades of life [7].Approximately 25-45% of the lesions occur in the head and neck region, however, intraoral lesions are rare [1].Most of the intraoral cases are found on the

upper and lower side of the tongue and vestibule, being rare on the palate [5,6]. Schwannomas are usually solitary lesions; however, in rare cases they can be multiple as a sign of von-Recklinghausen's neurofibromatosis [8]. Although ulceration of the overlying epithelium is rare [8].

Although schowannoma is a painless lesion, the pressure of the tumor on an adjacent nerve may cause paresthesia[9]. Clinically, two forms of oral schwannomas can occur: The most frequent is the encapsulated type, in which the tumor is surrounded by dense fibrous connective tissue; the other is the pedunculate type, resembling a fibroma [1]. The origin of schwannoma is unknown. It is believed to originate from proliferation of Schwann cells in the perineurium causing displacement and compression of adjacent nerve. It does not arise from cranial nerve I and II because they lack Schwann cells [1].

Schwannomas exhibit two microscopic patterns in varying amounts: Antoni A and Antoni B. Streaming fascicles of spindle-shaped Schwann cells are characterized by Antoni A. These cells often form a palisaded arrangement around central acellular eosinophilic areas known as Verocay bodies. Antoni B tissue is less cellular and less organized [3,10]. Schwannoma is treated by surgical excision. After treatment the lesion usually does not recur and malignant transformation is extremely rare [9]. We can conclude that the possibility of schwannoma should be kept in mind when dealing with an intraoral, well-circumscribed, soft-tissue lesion. It has an excellent prognosis and wide local excision is almost curative.

IV. Conclusion

Schwannoma is a slow-growing benign tumor that is rare in the hard palate. It is difficult to diagnose this tumor based on clinical appearance; as a result, histopathological examination is necessary for a definite diagnosis

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