Soft Palate Schwannoma

Sandhya Venkatachala · R. Krishnakumar ·
Sheik Afzal Rubby

Received: 25 October 2011 / Accepted: 21 June 2012 / Published online: 12 July 2012
© Association of Surgeons of India 2012

Abstract Schwannomas are relatively uncommon, slow-growing benign neoplasms that can arise from any cranial, peripheral or autonomic nerves. These neoplasms are derived from Schwann cells. The involvement of the palate is a rare presentation although there have been a few reported cases of schwannomas arising in the tongue. This is a case report of one such rare presentation—a case of Schwannoma in a 43-year-old man at a rare site, soft palate. At this location, the clinical diagnosis is confounded by other tumours such as minor salivary gland tumour, pyogenic granuloma and lipoma.

Keywords Schwannoma · Soft palate · S100

Introduction

Schwannomas are slow-growing benign tumors that are derived from the schwann cells. A total of 25–45% of

schwannomas occur in the head and neck regions, but only 1% are intraoral in origin [1]. When intraoral, the tongue is the most favoured site [2]. The involvement of the palate is a rare presentation. Its rare location brings other entities such as minor salivary gland tumours and pyogenic granuloma into the clinical differential diagnoses. We report a case of schwannoma at an uncommon location, soft palate.

Case Report

A 43-year-old man presented to the surgical outpatient with complaint of swelling in the oral cavity and discomfort during swallowing for the past 1 week. Medical history was non-contributory except that he was a known hypertensive on treatment. Examination of his oral cavity revealed a nodule of 2×2 cm in the soft palate on the right side extending into the hard palate. The nodule had well-defined margins and was firm in consistency. Surface ulceration was noted (Fig. 1) (seen as cheesy material in the figure). No regional lymph nodes were palpable. A provisional clinical diagnosis of minor salivary gland tumour was made. Excision biopsy was done and the tissue was sent for histopathological examination.

A grey white circumscribed nodule with surface ulceration measuring 1.5×1.5×1.0 cm was seen with focal pale brown areas. Microscopic examination revealed a neoplasm with morphological features characteristic of Schwannoma. The encapsulated neoplasm showed hypercellular Antoni A areas with Verocay bodies and hypocellular Antoni B areas. Dilated, congested blood vessels with fibrin in the vessel walls were noted in the Antoni B areas. Occasional mitotic figures were observed (Fig. 2B and C). Oral mucosa with salivary gland tissue was seen at one end (Fig. 2A). Immunohistochemical studies for S-100 protein showed both strong nuclear and cytoplasmic positivity (Fig. 2D) thus confirming the diagnosis.

S. Venkatachala
Department of Pathology,
PSG Institute of Medical Sciences & Research,
Coimbatore, India

R. Krishnakumar · S. A. Rubby
Department of Surgery,
PSG Institute of Medical Sciences & Research,
Coimbatore, India

R. Krishnakumar
e-mail: krishnakumar@psgimsr.ac.in

S. A. Rubby
e-mail: sheikafzal@psgimsr.ac.in

S. Venkatachala (✉)
PSG Hospitals,
G-6 Doctor's Quarters, Peelamedu,
Coimbatore 641004, Tamilnadu, India
e-mail: sandhyavenkatachala@yahoo.co.in

Fig. 1 Shows a nodular swelling with surface ulceration in the soft palate extending to the hard palate

Discussion

Schwannomas (neurilemmomas) are benign encapsulated nerve sheath neoplasms composed of schwann cells first described by Verocay in 1908 [3]. They can arise from any

cranial, peripheral or autonomic nerve [4]. A total of 25–45% of Schwannomas are seen in the head and neck region. Only 1% are intraorally located [1]. In the oral cavity, the tongue is the most common site followed by floor of the mouth, palate, gingiva, vestibule and lips [5]. In the present case, the neoplasm was seen in the soft palate on the right side. This neural tumour can present at any age. However, it is more common between the second and third decades of life [6]. Regarding gender distribution, William and others found a male predominance whereas other studies showed equal distribution between both sexes [5, 7]. Our patient was a 43-year-old male.

Clinically, two forms of oral Schwannoma can occur: the most frequent encapsulated and the other pediculate resembling a fibroma [8]. The preoperative diagnosis is quite difficult without imaging techniques such as computed tomography and magnetic resonance as Schwannoma is an infrequent tumour in the oral cavity, as was seen in our case. Taking into consideration the intraoral location of the tumour, entities such as minor salivary gland tumor, fibroma, and lipoma are to be considered in the clinical differential diagnoses [6]. In the present case, the provisional clinical diagnosis was a minor salivary gland tumour.

By histopathological study, the present case revealed the characteristic Antoni A area with verocay body and Antoni B areas. Further, the neoplastic cells were positive for S100.

Fig. 2 A shows oral mucosa with salivary gland tissue and schwannoma (H&E, 50X) B shows Antoni A area with Verocay body (H&E,100X) C shows Antoni B area with blood vessels and fibrin (H&E,100x) D shows S100 positive tumour cells (H&E,400X)

Other tumours of the neurological origin that needs to be differentiated from Schwannoma would be traumatic neuroma, neurofibroma nerve sheath myxoma and ganglioneurofibroma [5]. Proliferation of axons and Schwannoma cells is seen in traumatic neuroma while neurofibroma shows a mixture of schwann cells, axons, perineurial cells and fibroblasts. The axons can be demonstrated by immunohistochemical staining for neurofilaments. Nerve sheath myxoma can be identified by plump epithelial cells in a myxoid matrix [9].

The treatment of choice is excision. The Schwannoma should be extirpated in its entirety to avoid tumour recurrence, even if the nerve of origin cannot be preserved, because of the possibility of malignant transformation, which although rarely has been described in the literature [10].

References

1. Pfeifle R, Baur DA, Paulino A, Helman J (2001) Schwannoma of the tongue: report of 2 cases. *J Oral Maxillofac Surg* 59:802–804
2. Chawla O, North S, Yastes JM (2011) Schwannoma presenting in the soft palate of a nine year old boy. *Dental Update* 38:327–328
3. Naidu GS, Sinha SM (2010) Schwannoma of the tongue: an unusual presentation in a child. *Indian J Dent Res* 21:457–459
4. Lollar KW, Pollak N, Liess BD, Miick R, Zitsch RP (2010) Schwannoma of the hard palate. *Am J Otolaryngol* 31:139–140
5. Carriches CL, Byran RBP, Montero SM (2009) Schwannoma located in the palate: clinical case and literature review. *Med Oral Patol Cir Bucal* 14:465–468
6. Martins MD, Jesus LA, Fernandes KPS, Bussadori SK, Taghloubi SA, Martins AT (2009) Intra-oral Schwannoma: case report and literature review. *Indian J Dent Res* 20:121–125
7. William HK, Cannell H, Silvestir K, Williams DM (1993) Neurilemmoma of the head and neck. *Br J Oral Maxillofac Surg* 31:32–35
8. Hribnik SJ, Gould AR, Alpert B, Jones JL (1992) Well circumscribed mass of the lateral floor of the mouth. *J Oral Maxillofac Surg* 50:741–746
9. Rosai J (1996) Soft tissues. In: Rosai J (ed) *Ackerman's surgical pathology*, vol. 2, 8th edn. Mosby-Year Book Inc, New York, pp 2042–2050
10. Kun Z, Zhang KH (1993) A comparison between the clinical behaviour of neurilemmomas in the neck and maxillofacial region. *J Oral Maxillofac Surg* 51:769–771