

Intraosseous schwannoma of mandible: a rare entity as an incidental finding on an orthopantomogram

Rajeswari Ramesh,¹ Pearlcid Siroraj ,² Thomson Mariadasan Dcruz ,³ Mary Violet Jeyapriya⁴

¹Oral Pathology, Siroraj Hospital, Thoothukudi, India, Thoothukudi, Tamil Nadu, India

²Oral and Maxillofacial Surgery, Sri Ramachandra Institute of Higher Education and Research (Deemed to be University), Chennai, Tamil Nadu, India

³Oral and Maxillofacial Surgery, YMT Dental College and Research Centre, Navi Mumbai, Maharashtra, India

⁴Orthodontics, Rajas Dental College, Thoothukudi, Tamil Nadu, India

Correspondence to

Dr Pearlcid Siroraj;
pearlcid@hotmail.com

Accepted 14 June 2022

DESCRIPTION

A unilocular radiolucency involving the mandible poses a diagnostic enigma in the case of asymptomatic patients. A plethora of pathologies such as giant cell lesions, odontogenic cysts or tumours and vascular tumours are often considered while investigating an incidentally found mandibular radiolucency presenting no clinical signs or symptoms. However, tumours such as schwannoma are often neglected.

Schwannomas (neurilemmomas) are benign, slow growing nerve sheath tumours arising from the Schwann cells that cover the myelinated nerve fibres.¹ First described by Virchow in 1908 and later named as neurilemmoma by Verocay in 1910, schwannomas are usually encapsulated. A total of 88 cases of intraosseous schwannomas of the jaws have been reported in literature. The mandible is the most common site, accounting for 85% of the cases.² The common symptoms associated with



Figure 1 (A) Orthopantomogram indicating a well-defined radiolucency measuring 1 cm x 1 cm in relation to the apex of mandibular right first molar tooth. The lesion can be seen involving the inferior alveolar nerve canal. (B) Intraoperative image depicting the defect postenucleation of the lesion.

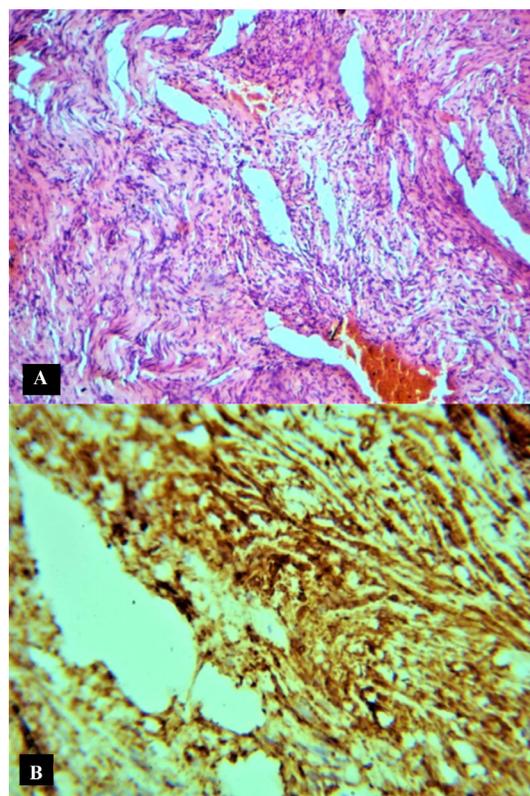


Figure 2 (A) Photomicrograph demonstrating Antoni A areas, Verocay bodies and Antoni B areas. (B) Immunohistochemical analysis depicting positivity for S100 protein confirming the diagnosis of schwannoma.

intraosseous schwannomas include tooth mobility and displacement, swelling, pain and paraesthesia, which are seen in 84% of the cases at the time of diagnosis.² In almost all the cases, histopathological analysis gives a definitive diagnosis of schwannoma. The histopathological features include encapsulation, presence of well-differentiated cells with nuclear palisading surrounding Verocay bodies (Antoni type A tissue) and poorly organised cells with thickened blood vessels (Antoni type B tissue).³ Since schwannomas are well encapsulated, surgical enucleation remains the treatment of choice, with a recurrence rate of 8%.² Postoperative paraesthesia was noted in 8% of the cases and there is lack of evidence regarding the return of sensation following paraesthesia.²

A young woman reported to the dental office with pain in her lower left back tooth region. No relevant medical history was presented. Intraoral examination revealed an impacted mandibular



© BMJ Publishing Group Limited 2022. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Ramesh R, Siroraj P, Dcruz TM, et al. *BMJ Case Rep* 2022;**15**:e250192. doi:10.1136/bcr-2022-250192

Images in...

third molar on the left side with no visible facial swelling. An orthopantomogram was advised for evaluation of the impacted tooth and an incidental finding of a well-defined radiolucency measuring about 1 cm × 1 cm in diameter involving the right body of the mandible lying directly over the inferior alveolar canal was detected from the orthopantomogram (figure 1A). A CT was obtained to determine the exact boundaries and the nature of the lesion. A provisional diagnosis of giant cell tumour, odontogenic tumour and peripheral nerve sheath tumour was made. Under general anaesthesia, an intraoral muco-vestibular incision was placed and surgical enucleation of the lesion

along with a part of the inferior alveolar nerve was performed (figure 1B). Classic Antoni A and Antoni B areas with Verocay bodies (figure 2A) were noted in the histopathological sections and a strong positivity for S100 staining was also observed (figure 2B), confirming the diagnosis of Schwannoma. A 1 year follow-up revealed no signs of recurrence and partial return of sensation to the right-side lower lip.

Patient's perspective

On a lighter note, I am thankful to my wisdom teeth for giving me the trouble. Else this tumour would not have been diagnosed until late. I am happy the doctors got rid of the tumour this early and my lip sensation has returned to around 70% of the presurgery levels.

Learning points

- ▶ Radiographic imaging can play a pivotal role in identifying rare intraosseous pathologies, especially in the absence of clinical signs or symptoms.
- ▶ Schwannomas can be considered in the differential diagnosis of unilocular, well-circumscribed lesions centred on the inferior alveolar nerve.
- ▶ Early management of these benign neural tumours may reduce complications such as bony erosion and loss of teeth.

Contributors RR is the pathologist who diagnosed this case and contributed to manuscript preparation. PS is the sole operating surgeon and also contributed to manuscript preparation. TMD contributed to the preparation of the manuscript and final language editing. MVJ contributed to the manuscript preparation and patient care. RR and PS contributed equally to the management of this case and manuscript preparation.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Consent obtained directly from patient(s).

Provenance and peer review Not commissioned; externally peer reviewed.

Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

ORCID iDs

Pearlcid Siroraj <http://orcid.org/0000-0002-3340-1391>

Thomson Mariadason Dcruz <http://orcid.org/0000-0001-5911-481X>

REFERENCES

- 1 Chi AC, Carey J, Muller S. Intraosseous schwannoma of the mandible: a case report and review of the literature. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2003;96:54–65.
- 2 Perkins D, Stiharu TI, Swift JQ, *et al*. Intraosseous schwannoma of the jaws: an updated review of the literature and report of 2 new cases affecting the mandible. *J Oral Maxillofac Surg* 2018;76:1226–47.
- 3 Neville BW, Damm DD, Allen CM. *Oral & Maxillofacial Pathology*. 4th Edition. Missouri: WB Saunders, Elsevier, 2016: 492–4.

Copyright 2022 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <https://www.bmj.com/company/products-services/rights-and-licensing/permissions/> BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

Customer Service

If you have any further queries about your subscription, please contact our customer services team on +44 (0) 207111 1105 or via email at support@bmj.com.

Visit casereports.bmj.com for more articles like this and to become a Fellow