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Galal Omami

University of Kentucky, galal.omami@uky.edu

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Multicentric Synchronous Giant Cell Granulomas of the Mandible

Galal Omami, BDS, MSc, MDentSc, FRCD(c)¹ 

Keywords

granuloma, giant cell, jaw disease, multiple primary

Multiple central giant cell granulomas of the jaws may be associated with systemic conditions such as hyperparathyroidism, cherubism, Noonan-like syndrome, Ramon syndrome, and Jaffe–Campanacci syndrome.^{1,2} If clinical examination and laboratory tests do not suggest the diagnosis of hyperparathyroidism or an inherited syndrome, then most children with multiple symmetrical giant cell granulomas represent a form of cherubism. However, there have been rare reports of multiple synchronous giant cell granulomas for which other causes have been excluded.^{3,4} There is a familial tendency to multiple lesions of this nature in some cases.⁵

Giant cell granuloma of the jaws tends to occur in younger patients, most frequently before the age of 20 years, and it affects twice as many females as males. The lesion may arise in any area of the jaws but is seen more often where there are or have been deciduous teeth (ie, anterior to the first permanent molars).

The radiographic appearance of giant cell granuloma depends on the size of the lesion (Figure 1). Smaller lesions are unilocular (totally radiolucent), and larger lesions have a faint granular pattern of internal calcifications.⁶ In some lesions of the later type, there is one or more ill-defined wispy septa. Occasionally, the septa are rather substantial and coarse which divide the internal structure into a multilocular “soap bubble” appearance. The lesion usually has a well-defined cortical border, although it may have ill-defined margins, raising the possibility of a malignant condition.⁷ Some giant cell granulomas have markedly undulating margins. If present, coupled with some wispy internal septa, this is suggestive of the lesion. Often there is rather marked expansion of the adjacent cortical plates. Enlarging lesions are capable of causing bone destruction, occasionally with extension into the surrounding soft tissues.⁶ Tooth displacement and resorption are common.⁸

Giant cell granulomas of the jaws are usually treated by enucleation and curettage, sometimes supplemented with local osteotomy, although some aggressive and recurrent lesions require more radical surgery. Recurrence rates range from 13% to 49%.⁸

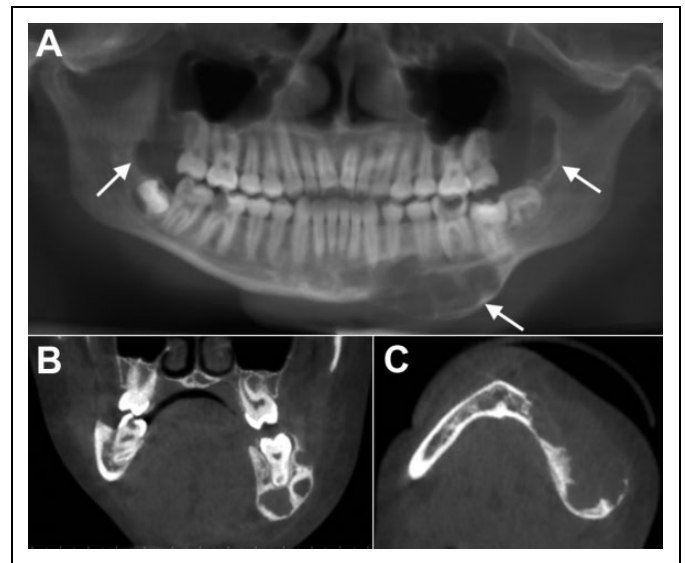


Figure 1. Multiple giant cell granulomas of the jaw in an otherwise healthy 14-year-old girl. A, Reformatted panoramic cone-beam computed tomography (CBCT) image shows 3 giant cell lesions throughout the mandible (arrows). B, Coronal CBCT image shows a multilocular lesion in the body of the left mandible. Note the thick, curved septa. C, Axial CBCT image demonstrate significant expansion of the mandibular body as well as destruction of the buccal cortex; also note the crenations causing scalloping of the endosteal surface.

¹ Division of Oral Medicine, Diagnosis and Radiology, Department of Oral Health Practice, University of Kentucky College of Dentistry, Lexington, KY, USA

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Corresponding Author:

Galal Omami, BDS, MSc, MDentSc, FRCD, Division of Oral Medicine, Diagnosis and Radiology, Department of Oral Health Practice, University of Kentucky College of Dentistry, 800 Rose Street, Room MN-320, Lexington, KY 40536, USA.

Email: galal.omami@uky.edu



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ORCID iD

Galal Omami  <https://orcid.org/0000-0003-1187-1816>

References

1. Edwards PC, Fox J, Fantasia JE, Goldberg J, Kelsch RD. Bilateral central giant cell granulomas of the mandible in an 8-year-old girl with Noonan syndrome (Noonan-like/multiple giant cell lesion syndrome). *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2005;99(3):334-340.
2. Wolvius EB, de Lange J, Smeets EE, van der Wal KG, van den Akker HP. Noonan-like/multiple giant cell lesion syndrome: report of a case and review of the literature. *J Oral Maxillofac Surg.* 2006;64(8):1289-1292.
3. Kang MS, Kim HJ. Multiple synchronous central giant cell granulomas of the maxillofacial region: a case report. *Korean Soc Radiol.* 2010;62(1):11-15.
4. Munde A, Modi P, Karle R, Wankhede P, Shoeb S. Nonsyndromic synchronous multifocal central giant cell granulomas of the maxillofacial region: report of a case. *J Dent (Tehran).* 2015;12(2):157-162.
5. Tecco S, Caruso S, Nota A, et al. Bilateral central giant cell granuloma of the mandibular angle in three females from the same family. *Head Face Med.* 2018;14(1):14.
6. Nackos JS, Wiggins RH 3rd, Harnsberger HR. CT and MR imaging of giant cell granuloma of the craniofacial bones. *AJNR Am J Neuroradiol.* 2006;27(8):1651-1653.
7. Wang Y, Le A, El Demellawy D, Shago M, Odell M, Johnson-Obaseki S. An aggressive central giant cell granuloma in a pediatric patient: case report and review of literature. *J Otolaryngol Head Neck Surg.* 2019;48(1):32.
8. Kruse-Lösler B, Diallo R, Gaertner C, Mischke KL, Joos U, Kleinheinz J. Central giant cell granuloma of the jaws: a clinical, radiologic, and histopathologic study of 26 cases. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2006;101(3):346-354.