

A Unique Case of Mandibular Bony Extension in the Vicinity of Superior Pharyngeal Constrictor

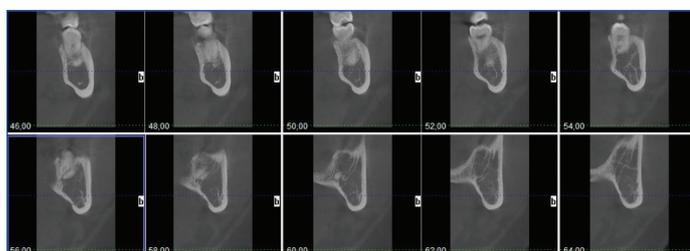
LEYLA BERNA ÇAĞIRANKAYA

Keywords: Mandible, Muscles of pharynx, Mylohyoidridge

A 28-year-old male attended a dental faculty for a routine dental examination. During clinical examination, the patient with normal facial appearance reported no current systemic diseases. When the digital panoramic X-ray was examined, bilateral symmetrical bone structures related to the distal end of mylohyoid ridge was observed [Table/Fig-1]. Detailed radiographic examination was done with Cone Beam Computed Tomography (CBCT) (iCAT_Next Generation, Imaging Sciences International, Hatfield, PA, USA). CBCT examination confirmed medially extending bony structures arising from the end of the mylohyoid ridge [Table/Fig-2]. Bony structures were identical in both figure and location [Table/Fig-3]. Furthermore, CBCT revealed reduction in the oropharyngeal airway dimension in the vicinity of the structure [Table/Fig-4]. However, the patient has not reported any complaint.



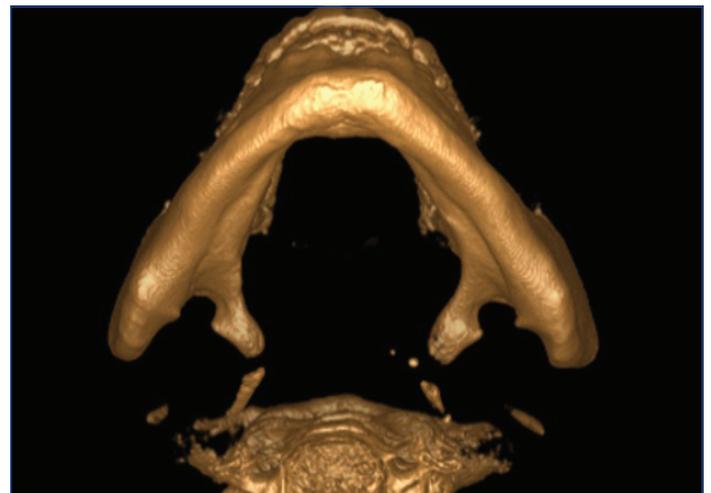
[Table/Fig-1]: Panoramic radiograph of the patient. Arrows point to the aberrant structures related with the distal end of mylohyoid ridges. Radiopaque bands above them corresponds to the ghost images of the structures.



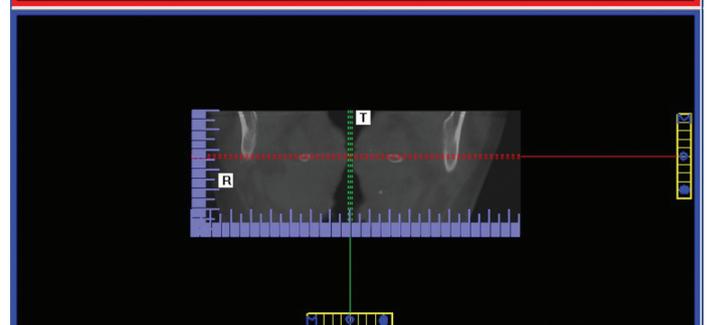
[Table/Fig-2]: Cross-sectional images delineate that structures have bony architecture and arise from the end of the mylohyoid ridge.

DISCUSSION

Fibres of the superior pharyngeal constrictors arise partly from the posterior end of the mylohyoid line and curve back into the median pharyngeal raphe [1]. In the present case, although relevant soft tissues could not be analysed due to the limitation of CBCT [2], these bony extensions were rather compatible with superior pharyngeal constrictor in shape and localisation. Therefore, they were speculated to be related to the muscles of pharynx.



[Table/Fig-3]: A 3D CBCT view demonstrates identical structures on both side of the mandible. Shape and localisation of aberrant bone are rather compatible with superior pharyngeal constrictor.



[Table/Fig-4]: Axial and sagittal views indicate reduction in the oropharyngeal airway dimension in the vicinity of the structures.

There are reported cases of prominent bony extensions of mandible at the muscle attachment areas [3,4]. However, to the best of author's knowledge, this case is a unique instance in the vicinity of pharyngeal muscles.

The differential diagnosis of the case includes replication of mandibular segments which is an example of diprosopus (craniofacial duplication). Craniofacial duplication is a rare craniofacial anomaly. While true diprosopus refers to the complete

duplication of facial structures with two faces on a single head, partial craniofacial duplication describes a broad spectrum of deformities and malformations. Duplication of the jaws may present as isolated parts, with or without involvement of the dentition, such as mandibular condyle, ascending ramus, palate, or alveolar arch duplications [5]. In the present case, extensions were rather compatible with superior pharyngeal constrictor in shape and localisation. Therefore, they were considered as associated with pharyngeal muscles.

Panoramic radiographs have many useful applications in dentistry but require diligence on the part of the observer to examine the image thoroughly [6]. A systematic approach to the interpretation of this image would reveal many occult conditions. However, in similar cases where panoramic radiography is not sufficient, CBCT would be beneficial. Yet, it must be emphasised that; although CBCT applications provide obvious benefits in the assessment of

dentomaxillofacial region with lower effective radiation doses than medical CT, it should be used only in correct indications considering the necessity and potential hazards of the examination [2].

REFERENCES

- [1] Williams PL, Dyson M. Splanchnology. In: Gray's Anatomy. Churchill Livingstone, UK. 1989:1245-1450.
- [2] Kamburoğlu K. Use of dentomaxillofacial cone beam computed tomography in dentistry. World J Radiol. 2015;7(6):128-30.
- [3] Pauna MR, Babiuc I, Farcaşiu AT. Prosthodontic management of an extreme atrophy of the mandible correlated with a prominent genial tubercle. Rom J Morphol Embryol. 2015;56(2 Suppl):876-70.
- [4] Jindal G, Jindal S, Sharma P, Singla A. Rare enlargement of genial tubercles and its management: a case report. JCDR. 2015;9(11):23-24.
- [5] Costa MA, Borzabadi-Farahani Ali, Lara-Sanchez PA, Schweitzer D, Jacobson L, Clarke N, et al. Partial craniofacial duplication: a review of the literature and a case report. Journal of Cranio-Maxillo-Facial Surgery. 2014;42:290-94.
- [6] Perschbacher S. Interpretation of panoramic radiographs. Aust Dent J. 2012;57(1 Suppl):40-45.

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Dentomaxillofacial Radiology, Hacettepe University, Faculty of Dentistry, Sıhhiye, Ankara, Turkey.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Leyla Berna Çağırankaya,
Associate Professor, Department of Dentomaxillofacial Radiology, Hacettepe University, Faculty of Dentistry,
Sıhhiye-06100, Ankara, Turkey.
E-mail: lbartvinli@yahoo.com

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Oct 26, 2018**
Date of Peer Review: **Nov 29, 2018**
Date of Acceptance: **Dec 20, 2018**
Date of Publishing: **Feb 01, 2019**