

Benign Fibrous Histiocytoma in the anterior mandible of a pediatric patient: A Case Report

Khoja, A¹, Discepolo, K¹, Chigurupati, R², Sethi, A², Shanmugham, J¹¹Boston Medical Center (BMC), Department of Pediatric Dentistry, School of Dental Medicine, Boston University, Boston, MA²Boston Medical Center (BMC), Department of Oral and Maxillofacial Surgery, School of Dental Medicine, Boston University, Boston, MA

Introduction:

Benign Fibrous Histiocytoma (BFH) is a soft tissue neoplasm, which mostly affects the skin of extremities. It rarely occurs in bones, and is mainly reported in femur, tibia, and pelvic bone. The occurrence in jawbones is very rare and may appear like odontogenic or non-odontogenic lesions of the maxilla and mandible.

Case Report:

Patient background :

13-year-old male patient who was first referred to Boston Medical Center (BMC) Department of Oral and Maxillofacial Surgery for evaluation of a mandibular lesion after being incidentally noticed by the patient's general dentist. The patient did not report any pain associated with the lesion. Also, the patient did not report any drug allergies and did not have any pertinent past medical, family, surgical or medication history.

Clinical examination:

Comprehensive exam, radiographs, clinical exam and photos were taken.

Intra-oral examination revealed no buccal or lingual expansion and missing mandibular anterior teeth due to history of extractions. The remaining dentition are not mobile. The lesion was asymptomatic, hard in consistency, and covered by normal-appearing oral mucosa. Panoramic radiograph and computed tomography showed a unilocular, well defined radiolucent, osteolytic lesion in the anterior mandibular region, crossing the midline, causing some root resorption, displacement, and cortical bone erosion. Incisional biopsy was performed under general anesthesia, and histopathologic analysis revealed BFH of the bone.

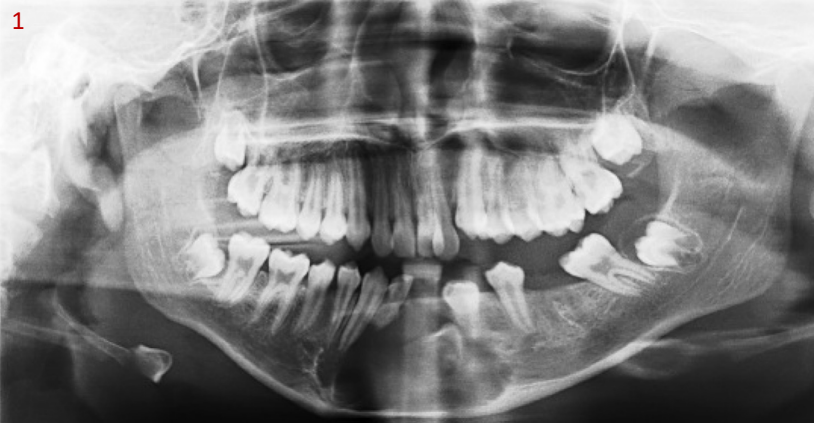


Figure 1: Pre-operative panorex xray taken in 2018, showing a large anterior mandibular lesion, crossing the midline, well defined radiolucency extending from tooth #21 to #27, causing resorption of the roots of the teeth involved and displacement of #22



Figure 2: Post-operative/ 2 years follow up panorex xray taken in 2021, showing bone is healing normally, with no sign of recurrence.



Figure 3: Post-op extra-oral pictures showing asymmetric facial outline, flattening of the left side of the face, and chin slightly deviated towards the right side. Post-op intra-oral pictures showing severe vertical bone loss, and moderate maxillary arch crowding.

Histologic findings:

the tumor was hypercellular and composed of plump spindle cells arranged in fascicles that are oriented in a storiform pattern. Scattered throughout are occasional small multi-nucleated osteoclast type giant cells. At the periphery of the tumor there are a small collection of aggregates of odontogenic epithelium that are associated with several bone trabeculae.

Treatment plan:

Excision of the anterior mandibular lesion, and extraction of the affected teeth was completed.

The future plan includes completion of comprehensive orthodontic treatment, implant placement, followed by prosthetic restoration with fixed or removable partial denture.

Conclusion

Due to the benign nature of the lesion, the patient's prognosis is good, as the entire lesion was removed and enucleated. However, periodic evaluation is recommended to monitor for potential recurrence.

References:

- Neville, Dammm, Allen, Chi, ORAL AND MAXILLOFACIAL PATHOLOGY book, FOURTH EDITION, 2016
- Agbara R, Fomete B, Obiadazie AC, Omeje KU, Samaila MO, Ajike SO. Fibrous histiocytoma of the orofacial region in Nigerians: A retrospective review of 11 cases. *Sahel Med J* 2019
- Pattamparambath M, Sathyabhama S, Khatri R, Varma S, Narayanan NM. Benign Fibrous Histiocytoma of Mandible: A Case Report and Updated Review. *J Clin Diagn Res.* 2016;10(6):ZD24-ZD26. doi:10.7860/JCDR/2016/19067.8056
- Feliciano, Dr. Robert, et al. "Benign Fibrous Histiocytoma of the Jawbones. Report of 2 Cases with Review of the Histologic and Immunohistochemical Features Distinguishing It from Other Spindle Cell Tumors of the Jawbones." *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*, Mosby, 12 June 2019

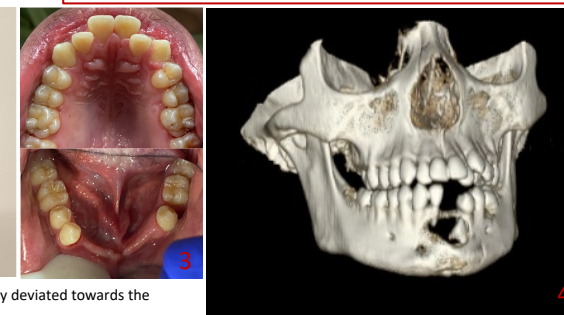


Figure 4: 3-d reconstruction of the anterior mandible, shows destructive lesion, causing thinning and dehiscence of the bone cortex with extension of the lesion into the adjacent labial and lingual soft tissues, displacement of teeth, involving the roots of teeth #22, 25 and 26 with erosion of the root of tooth #25, and unerupted #22 within the lesion.