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Corresponding Author:
Umamaheswari Giri, Department of Oral and Maxillofacial Pathology and Oral Microbiology, Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth (Deemed to be University), Puducherry 607402, India
E-mail: vgumamaheswari@gmail.com

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Unmasking a Diagnostic Dilemma: A Rare Cartilaginous Tumor in the Maxilla

Umamaheswari Giri[1], Santha Devy Arumugam[1], Lakshman VL[2,3], Bhuvanesh Kuppusami[4], Vezhavendhan N[1], Joice Vinodine C[1]

[1]Department of Oral and Maxillofacial Pathology and Oral Microbiology, Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth (Deemed to be University), Puducherry, India
[2]Department of Oral and Maxillofacial Pathology and Oral Microbiology, Indira Gandhi Institute of Dental Sciences, Sri Balaji Vidyapeeth (Deemed to be University), Puducherry, India
[3]Department of Oral Medicine and Radiology, Sri Venkateshwaraa Dental College, Puducherry, India
[4]Department of Oral and Maxillofacial Pathology and Oral Microbiology, Sri Venkateshwaraa Dental College, Puducherry, India

Abstract

Tumors characterized by the production of chondroid matrix, at least focally, are grouped under cartilaginous tumors. It ranges from benign lesions to highly aggressive neoplasms. Benign cartilaginous tumors are usually asymptomatic, with overlapping histopathological features that pose diagnostic challenges for pathologists. A male patient in his late twenties presented with a painless swelling in the right palatal region for three months. The patient had a history of nasal congestion and breathing difficulties. On examination, a unilateral lesion of size 6x4x2.5 cm extended antero-posteriorly from the canine to the maxillary tuberosity and mediolaterally from the right alveolus to the mid-palatine raphe. The surface was lobulated without any ulceration and no evidence of tooth mobility. The orthopantomogram (OPG) revealed an unilocular, well-defined lesion with a sclerotic border. Computed tomography (CT) showed a lytic lesion with destruction of the maxillary sinus walls. The key differentiating feature in histopathology is the lobular arrangement of hyaline cartilage supported by a myxoid background with matrix calcification, without any evidence of tissue dysplasia. Immunohistochemistry findings were consistent with the diagnosis of Chondromyxoid Fibroma (CMF), effectively differentiating it from malignant counterparts such as chondrosarcoma. The subtotal maxillectomy (Transoral approach) was performed under general anesthesia. The current case discussed a benign cartilaginous tumor mimicking malignancy, which has an incidence of less than 1% of all bone tumors, highlighting the diagnostic complexity and importance of histopathological confirmation.

Keywords: benign cartilaginous tumor, chondroid matrix, chondromyxoid fibroma (CMF)