Chondrosarcoma of Maxilla: A Case Report

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Chondrosarcomas are a rare malignant neoplasm of head and neck region. The exact origin of Chondrosarcoma is obscure; it may be found developing in normal cartilage, chondromas or osteochondromas. Chondrosarcoma has a slow clinical evolution. The symptoms are usually non-specific and may defer depending on the location of the tumor. Resorption and exfoliation of teeth sometimes occur. It may mimic the appearance of osteosarcoma on radiographs. Diagnosis of the lesion is mainly based on the histopathological appearance. An uncommon case of low-grade chondrosarcoma of the maxilla in a 50-year-old male patient is reported, the clinical and histopathological features are discussed.

Keywords: Chondrosarcoma, Maxilla, Mitotic figures, Tumors

INTRODUCTION

Chondrosarcomas are malignant tumors arising from cartilage cells that tend to maintain their essentially cartilaginous nature through their evolution.¹ Chondrosarcoma constitutes approximately 11% of all primary malignant bone tumors and, after osteosarcoma, is the second most common sarcoma arising in bone.² Chondrosarcomas are rare in head and neck region. Most chondrosarcomas of head and neck region occur in maxilla, nasal septum, nasal cavity, and mandible.³ Males are more often affected in a ratio of 2:1.⁴ The tumor can occur at any age between 10 and 80 years, peak incidence is between 30 and 60 years.⁴ Chondrosarcoma radiographically appears as a lytic lesion with sclerotic margins, endosteal scalloping and associated stippled calcification. Cortical destruction occurs at later stage of the disease.⁵ Based on mitotic rate, cellularity, and nuclear size chondrosarcoma is classified as Grades I, II, and III. Grade I and Grade II chondrosarcoma is predominant in head and neck region. Computed tomography scan and magnetic resonance imaging helps in the diagnosis of chondrosarcoma. In the present case, a 50-year-old male complained of swelling in premaxilla and palate. Even though the mass was asymptomatic, there was the extensive destruction of underlying bone existed, along with exfoliation of teeth in the region.

CASE REPORT

A 50-year-old male reported to Department of Dentistry, Hassan Institute of Medical sciences Hassan with the complaint of swelling in left zygoma region, which was painless. Patient noticed the swelling 4 years back; it has gradually increased to attain the present size.

On extraoral examination, swelling was noticed in left premaxillary region of the face obliterating the nasolabial fold, which is firm and non-tender on palpation. The lesion was measuring approximately 3 cm × 3.5 cm and the overlying skin was normal (Figure 1).

On intraoral examination, swelling extending into alveolus and palate from 22 to 26 measuring about 5 cm × 4.5 cm with obliteration of labial vestibule. Mucosa intact (Figure 2). History of exfoliation and extraction of teeth in the region (22-26) due to mobility.

Computed tomography scan of faciomaxillary region showed, heterogeneous density lesion involving anterior and left maxillary arch causing the destruction of underlying bone. Soft tissue component is measuring 5 cm × 4.7 cm with extended into the nasal cavity, left maxillary sinus and into the buccal surface and underlying skin (Figure 3a and b).

An incisional biopsy was performed under local anesthesia in an aseptic condition, tissue with white glissering appearance sent for histopathology in 10% formalin as fixative (Figure 4).

Histopathology shows lesional tissue composed of lobules of chondroid tissue with increased cellularity. Chondrocytes
The Chondrosarcoma is a neoplasm that may arise in any bone, but shows predilection for the pelvic girdle, chest wall, and scapula. Chondrosarcoma of maxillofacial region is rare. Approximately, 1-3% of all chondrosarcomas arise in the head and neck area. Some of the maxillary tumors represent lesions that originated in the cartilage of nasal
cavity and invaded the maxillary bone. Commonly presents as a painless mass or swelling and may be associated with loosening of teeth. Radiographically chondrosarcomas usually exhibit some form of calcification within their center, giving them a mixed radiolucent-radioopaque appearance.

Histological appearance of chondrosarcoma is variable although all demonstrate the formation of cartilage, but not osteoid or bone from sarcomatous stroma. Calcification of chondroid matrix does occur in chondrosarcomas. It also shows hypercellularity, particularly cartilage cells with plump nuclei, binuclear or trinuclear or multinuclear cartilage cells, nuclear hyperchromatism, both cellular and nuclear pleomorphism.

Radical resection is the most effective primary modality for the treatment of chondrosarcoma as it is considered to be radioresistant. The Prognosis of chondrosarcoma depends on the size, location, grade and surgical respectability of tumor as it shows a wide variation in time of recurrence and metastasis. The 5 years survival rates were 90%, 81% and 43% for Grades 1, 2, and 3 respectively. According to Sato et al. recurrence of chondrosarcoma is frequent because of the complicated location which doesn’t allow complete surgical excision of the lesion. Recurrence may occur 10-20 years following surgery, thus, long-term follow-up is required.

CONCLUSION

Chondrosarcoma is a rare tumor of maxilla. The histopathological features of chondrosarcoma resembles many tumors, hence, the diagnosis of chondrosarcoma is quiet challenging for pathologists. Due to its aggressive and recurrence nature, long-term follow-up and treatment is necessary.

REFERENCES