



## EDİTÖRE MEKTUP / LETTER TO THE EDITOR

### Chondroblastic osteosarcoma: the wolf in sheep's clothing

Kondroblastik osteosarkom: koyun görünümünde kurt

Manas Bajpai<sup>1</sup>, Nilesh Pardhe<sup>1</sup>

<sup>1</sup>Department of Oral and Maxillofacial Pathology, NIMS Dental College, Jaipur, India

*Cukurova Medical Journal 2018;43(3):761-762*

Dear Editor,

Osteosarcoma (OS) is a rare but highly malignant bone tumour. Based on the extracellular matrix produced by tumor cells, conventional OS can be subdivided in fibroblastic, osteoblastic and chondroblastic types.<sup>1</sup> Chondroblastic OS is defined as any osteoid and/or bone, produced by uncommitted mesenchymal cells without first passing through a cartilaginous phase, no matter what the extent of the chondromatous element.<sup>2</sup> A 49 year old male presented to the Out Patient Department (OPD) of our Institution with the chief complaint of painful swelling of the left lower back region of the jaw since 3 months. The swelling was initially small but gradually increased to the current size. The pain was continuous, non – radiating and aggravated on eating. Past medical history and family history were not relevant to the presenting symptom. Extra – oral examination revealed a diffuse swelling of the face that caused facial asymmetry. The left submandibular lymph nodes were palpable. The swelling was tender on palpation. Intra – oral examination revealed a bony hard swelling extending from tooth #33 to the left body of the mandible measuring about 3×3 cm. The color of the swelling was red with areas of ulceration. Panoramic radiograph revealed a mixed radiopaque – radiolucent lesion extending from the root of tooth #32 to the body of the mandible. The roots of #34, #35, and #36 showed resorption. Tooth #37 was missing and #38 was impacted. A provisional diagnosis of osteosarcoma was given and patient was referred to the oncology unit for the treatment. Radical surgical resection along with hemimandibulectomy was performed. Excised

specimen was sent to the Department of Oral and Maxillofacial Pathology NIMS Dental College, Jaipur, India (Figure 1), for histopathological evaluation. The defect was restored by titanium reconstruction plates. The follow up period of 1 year was uneventful.

Hematoxylin and eosin stained tissue revealed numerous cartilaginous and osseous areas interspersed in a sparse connective tissue stroma. (Figure 2). Neoplastic bone formation was seen lined by malignant osteoblasts, the stroma showed areas of myxoid degeneration at places. (Figure 3) There were highly cellular cartilaginous areas, chondrocytes arranged in lacunae with nuclear pleomorphism. (Figure 4) Based on histopathological examination a final diagnosis of chondroblastic OS was rendered.

Chondroblastic OS of jaw are rare tumors, account for 50% of all the subtypes of OS and generally show relatively better prognosis. The diagnosis of chondroblastic OS is not possible on the grounds of clinical and radiographic features.<sup>3</sup> The histopathological diagnostic criteria of chondroblastic OS is comprised of areas cellular cartilaginous tissue with dysplastic features with varying amount of neoplastic bone formation.<sup>2,3</sup> Diagnosis of chondroblastic OS often produces a diagnostic difficulty and can be mistaken as chondrosarcoma: especially in the cases when the osteoid is absent in incisional biopsy and/ or in unrepresentative tissue samples.<sup>3</sup> Chondrosarcomas are relatively uncommon in jaw bones and show better prognosis than OS. According to Garrington's series of 45 cases, the overall 5 year

Yazışma Adresi/Address for Correspondence: Dr. Manas Bajpai, Department of Oral and Maxillofacial Pathology, NIMS Dental College, Jaipur, India E-mail: dr.manasbajpai@gmail.com  
Geliş tarihi/Received: 29.05.2017 Kabul tarihi/Accepted: 29.09.2017

survival rate for maxillary OS was 25% and for mandibular OS, 41%.<sup>2</sup> The overall 5 year survival rate of chondrosarcoma is 67%.<sup>4</sup> OS is sensitive for chemotherapy and radiotherapy while

chondrosarcoma is resistant. The demarcation between the two is mandatory to direct a proper treatment approach.



Figure 1. Resected specimen.

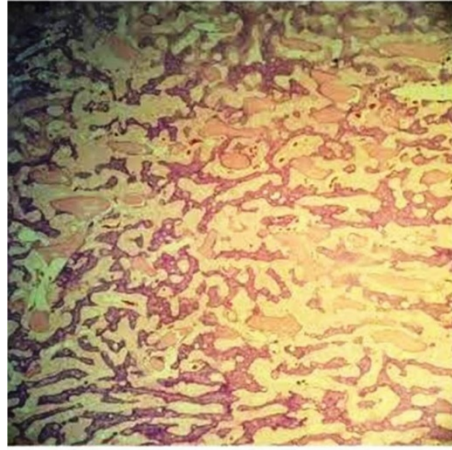


Figure 2. Abundant cartilage and bone formation (Hematoxylin and Eosin X10).

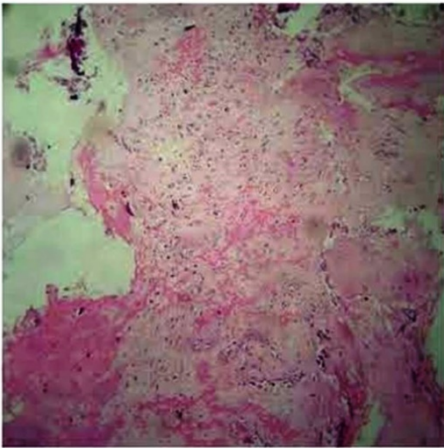


Figure 3 Neoplastic osteoids lined by malignant osteoblasts. (Hematoxylin and Eosin X 20).

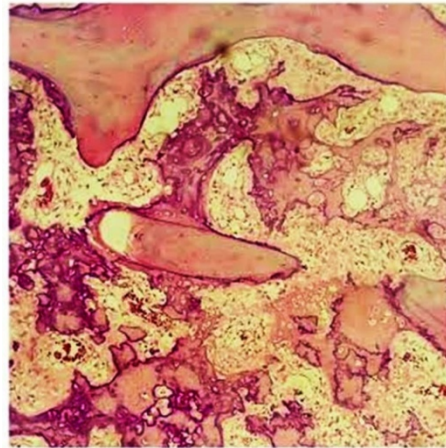


Figure 4 Cellular cartilaginous tissue with pleomorphic nuclei and neoplastic osteoids formation. (Hematoxylin and Eosin X40).

## REFERENCES

1. Bajpai M, Pardhe N, Chandolia B, Arora M. Osteogenic sarcoma of mandible. *J Coll Physician Surg Pak.* 2017;27:26-27.
2. Garrington GE, Scofield HH, Cornyn J, Hooker SP. Osteosarcoma of the jaws: analysis of 56 cases. *Cancer* 1967;20:377-91.
3. Tossato Pdos S, Pereira AC, Cavalcanti MG. Osteosarcoma and chondrosarcoma--radiographic differentiation using computerized tomography. *Pesqui Odontol Bras.* 2002;16:69-76.
4. Izadi K, Lazow SK, Solomon MP, Berger JR. Chondrosarcoma of the anterior mandible. A case report. *N Y State Dent J.* 2000;66:32-4.