# Epithelioid osteoblastoma

Epithelioid “aggressive” osteoblastoma (EOB) is a rare and more aggressive subtype of osteoblastoma (OB) with a higher recurrence rate, greater risk of malignant transformation, larger size, and greater intraoperative blood loss.

The result of statistical analysis suggested that Epithelioid OBL (EO) of the spine with Enneking classification stage 3 (St.3) and total spondylectomy were independent prognostic factors for recurrence-free survival (RFS).

St.3 or EO lesions seem to be more aggressive than St.2 or conventional osteoblastomas, but St.3 and EO should be considered simultaneously in predicting the aggressiveness of the lesion and the risk of recurrence. Total spondylectomy performed either by en bloc or piecemeal could significantly reduce recurrence of OBLs in the mobile spine [1].

## Case reports

Attiah et al. from Dr. Cipto Mangunkusumo Hospital published a epithelioid osteoblastoma of the temporal bone in 2018 [2].

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A 21-year-old male patient presented to the Jewish General Hospital with a 4-month history of neck discomfort, radicular pain in the proximal right arm, and mild weakness of the right biceps and triceps muscles. Imaging was suggestive of EOB, and computed tomography-guided biopsy confirmed the diagnosis. The patient underwent same-day preoperative angioembolization of the major feeding vessels and subsequent complete tumor resection. During the procedure, he experienced minimal blood loss and did not require blood transfusion.

EOB is a highly vascular primary bony lesion. To minimize intraoperative blood loss, preoperative angioembolization should be considered in the treatment of cervical spine EOB [3].

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A 34-year-old gentleman from Lucknow who presented with a mass involving the left side of the neck and oral cavity along with ipsilateral lower cranial nerve paresis. Computed tomography and magnetic resonance imaging scans of the craniovertebral junction revealed a heterogeneously enhancing expansile lesion with areas of destruction involving the clivus, left sided jugular foramen and left side of first two cervical vertebras. Angiography showed distortion of the V3 segment of the left vertebral artery and shift of the ipsilateral internal carotid artery. The tumor was maximally excised through far lateral approach. Histopathologic examination revealed a diagnosis of AO. The patient was referred for radiotherapy for the residual tumor and was doing well at 5 months follow-up [4].

## References

[1]
Jia Q, Liu C, Yang J, Yin H, Zhao J, Wei H, Liu T, Yang X, Yang C, Zhou Z, Xiao J. Factors Affecting

Prognosis of Patients With Osteoblastoma of the Mobile Spine: A Long-Term Follow-up Study of 70 Patients in a Single Center. Neurosurgery. 2018 Nov 27. doi: 10.1093/neuros/nyy570. [Epub ahead of print] PubMed PMID: 30481353.

2) Attiah M, Tucker AM, Niu T, Nagasawa DT, Kodrat E, Martin NA, Nelson S. Epithelioid Osteoblastoma of the Temporal Bone: A Case Report. World Neurosurg. 2018 Dec 3. pii: S1878-8750(18)32768-2. doi: 10.1016/j.wneu.2018.11.209. [Epub ahead of print] PubMed PMID: 30521959.

3) Schur S, Camlioglu E, Jung S, Powell T, Gutman G, Golan J. Preoperative Embolization and Complete Tumoral Resection of a Cervical Aggressive Epithelioid Osteoblastoma. World Neurosurg. 2017 Oct;106:1051.e1-1051.e4. doi: 10.1016/j.wneu.2017.06.183. Epub 2017 Jul 12. PubMed PMID: 28710051.

4) Singh DK, Das KK, Mehrotra A, Srivastava AK, Jaiswal AK, Gupta P, Behari S, Kumar R. Aggressive osteoblastoma involving the craniovertebral junction: A case report and review of literature. J Craniovertebr Junction Spine. 2013 Jul;4(2):69-72. doi: 10.4103/0974-8237.128533. PubMed PMID: 24744565; PubMed Central PMCID: PMC3980559.