

Osteoblastoma

The so-called benign osteoblastoma is considered by most to be a large or giant form of the similar clinical entity known as the osteoid osteoma. As in the osteoid osteoma, it is found in children and young adults and has a strong potential for males more than females. It is less common than the osteoid osteoma, representing approximately 1 per cent of all bone tumors. It will be found mostly in metaphyseal areas of long bone and in the posterolateral elements of the axial skeleton where nearly 50 per cent of the lesions are identified. Radiographically these lesions are more osteolytic compared to the osteoid osteoma and have a central nidus that measures over 1.5 centimeters in diameter with less reactive sclerosis seen at the periphery than the osteoid osteoma. It is not unusual for an aneurysmal component to be associated with the osteoblastoma, similar to the reaction seen adjacent to chondroblastomas and giant cell tumors. The microscopic appearance of the nidus material is almost identical to that of the osteoid osteoma and under high power cannot be differentiated by even the most competent pathologists. Histologically, osteoblastoma appears similar to an osteogenic sarcoma and, for this reason, multiple samples must be evaluated in order to establish the correct diagnosis in cases where these lesions arise from the metaphyseal areas of long bones.

In the spinal area, the osteoblastoma is typically located in the posterolateral elements where it can cause spinal cord or nerve root compression that may require aggressive surgical decompression and even spinal stabilization. Occasionally, an osteoblastoma will spontaneously convert into an osteosarcoma, especially if it has been treated with perioperative radiation therapy. The primary treatment for the osteoblastoma is a surgical one with a fairly aggressive curettage of lesion. There is no particular reason to take wide margins because the recurrence rate is quite low and in some cases the lesions resolve spontaneously without any surgery at all, similar to what occurs with osteoid osteomas.

A variant of the osteoblastoma, the so-called aggressive or "malignant" osteoblastoma, is a clinical entity that lays halfway between the classic benign osteoblastoma and a full-blown malignant osteosarcoma. This "malignant" osteoblastoma behaves and appears clinically at the local site like an osteosarcoma but has no potential to metastasize to distant parts. In this situation, the local treatment must be more aggressive and probably would require a wide resection to avoid a local recurrence because local radiation therapy or even systemic chemotherapy is not effective for this aggressive but benign entity.