Journal of Orthopedic Oncology

Case Report Open Access

A Case Report on Bone Tumor: Osteosarcoma of the Maxilla of Mixed Type

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Abstract

Osteosarcoma (OS), which accounts for approximately 20% of all primary bone cancers, is the most prevalent

6.5 cases per million people per year, people of Hispanic descent come in second, followed by Caucasians with an incidence rate of 4.6 cases per million people per year. For patients with OS, the overall survival rate ranges from 10% to 20%. However, the introduction of adjuvant chemotherapy for OS in the 1970s significantly increased survival rates to 60%-70% for patients without metastases and 20%-30% for recurrent or metastatic diseases. Although the causes of OS are unknown, trauma, extrinsic chemicals and carcinogens, and viruses are known to be risk factors. This occurred in our instance with a 48-year-old female who had a very uncommon mass in her maxilla. In addition, no risk factors were found in this instance, but ethnicity may have an impact on OS development. are unusual. Extensive lung involvement is indicated by respiratory symptoms. Due to the extremely low rate of metastasis to other sites, additional symptoms are uncommon. The primary tumor's location is the focus of the physical examination findings. They are a palpable mass that may be warm and tender, with or without pulsation or noise; Nevertheless, these symptoms are not specific. It is possible to observe joint involvement with decreased range of motion, unusual local or regional lymphadenopathy, and respiratory findings associated with metastatic involvement. In our instance, the patient presented with pain, swelling of the left cheek, a palpable solid mass, and pain that had grown in size over the previous three years. There were no other symptoms that might suggest metastasis to a different site. Left epiphora, exophthalmos, and blurry vision are indications of complications; rhinitis, and A single mass measuring 6 cm x 5 cm x 10 cm was discovered during a physical examination in the left maxillary-nasal-infraorbital region. The mass had a fixed, dense consistency, an irregular surface, distinct boundaries, and pain.

Orthogonal radiographs of the affected limb are taken to begin the examination. The bone will typically appear poorly marginated or moth-eaten on radiographs, with varying amounts of cloudy mineralized matrix and bone resorption areas. Alternatively, depending on the subtype, there might be cartilage or a fibrous matrix, or there might be a lot of bone resorption. Although laboratory tests are not diagnostic, it has been demonstrated that elevated levels of alkaline phosphatase and lactate dehydrogenase indicate a worse outcome.

The cortical integrity, for example, can be better defined by a CT scan, which also identifies pathology fractures and is helpful in providing a more precise evaluation of the ossification and calfication (condroid component). An MRI will clearly show the extent of the bone marrow invasion, the presence of any soft tissue masses, their size, and their relationship to the vital structures in the surrounding area. Unless additional information is required regarding the integrity of the cortex or the presence of a fracture, a CT scan generally performs better than an MRI. For tissue confirmation, a biopsy is required when a diagnosis of cancer is suspected. Typically, this can be accomplished with either ultrasound or CT guidance during a core needle biopsy. On panoramic radiographs, our patient's maxillary sinuses were destroyed of the permeative type, with a sunburst periosteal reaction, a broad transitional zone, and a chondroid-type matrix. The results of the CT scan suggested that there was an aggressive primary malignant bone tumor, probably of the chondrogenic type OS; Sinusitis of the right and left maxillae; lymphadenopathy of the right submandibular; and lymph nodes in the sub centimeter of the left submandibular, submental, and bilateral posterior trigonum. On thoracic radiographs, there were no signs of pulmonary metastases.

Anaplastic cells with oval-round nuclei were found in hypercellular specimens as revealed by FNAB. A few cells were binucleated and hyperchromatic, with good cytoplasm and eosinophilic matrix. Due to the modalities we had performed and discussions with the multidisciplinary team, we were able to decide to immediately begin treatment for this patient. In our case, we did not conduct any additional MRI examinations. Through the use of multidisciplinary treatment, surgery, and chemotherapy, modern therapy focuses on the local and systemic manifestations of disease. In our case, the maxilla was completely removed; Extended exenteration OS was also performed on the orbital floor, medial wall, and ethmoid sinus. In the end, we used titanium mesh to close and reconstruct the wound and installed an external obturator. Fortunately, our patient had no postoperative complications and was released from treatment five days later.

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We discuss the case of a 48-year-old woman who presented with left cheek swelling. An aggressive primary malignant bone tumor (most likely of the chondrogenic type OS) was detected by CT scan; both right and left maxillary swelling; lymphadenopathy of the right submandibular; and bilateral posterior trigonum lymph nodes on the left submandibular, submental, and subcentimetric side. The diagnosis of mixed type maxillary OS was confirmed by a biopsy taken during surgery.

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