



A DENTAL ABSCESS REVEALING A MANDIBULAR OSTEOSARCOMA: A CASE REPORT AND A LITERATURE REVIEW

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ABSTRACT

Introduction: Osteosarcoma (OS) is the most common malignant bone tumor in let us say (40 to 60% of cases , and comes after multiple myeloma i.e primary malignant tumors most commonly found in bones. It is usually localized at the level of the long bones, 5 to 10% are found in the jaws , 0.5 to 1% of tumors of the facial skeleton . The published series are, on the one hand, very few but on the other hand, they group few patients .

Clinical case: It is a 44-year-old patient with no significant history, the patient reported a dental pain. A dental consultation revealed the presence of a dental abscess. After medical treatment, the patient has benefited from a dental extraction, the aftereffects have been characterized by a tumefaction first endobuccal that was rapidly taking volume, all evolving in an apyrexia environment. An Endobuccal examination revealed a swelling in relation to the 46 that is developing at the vestibular level and on the outer table of the mandible .

An Exobuccal examination showed no trismus, positive vincent sign, an inflammatory skin Tumefaction in the mandible, which was slightly painful to the palpation.

The biopsy revealed a histological as well as an immunohistochemical appearance of an Osteoblastic osteosarcoma.,

Conclusion: The mandibular localization of osteosarcoma is rare. The diagnosis is first oriented by the clinic and the radiological explorations then an evidence is provided by the histological examination.

KEYWORDS : osteosarcoma, mandibular, osteoblast, tumefaction ,surgery, chemotherapy

Introduction

Osteosarcoma (OS) is the most common malignant bone tumor in let us say (40 to 60% of cases [1], and comes after multiple myeloma i.e primary malignant tumors most commonly found in bones. [2] It is usually localized at the level of the long bones, 5 to 10% are found in the jaws [3], 0.5 to 1% of tumors of the facial skeleton [4-5]. The published series are, on the one hand, very few but on the other hand, they group few patients [6-7].

Bones are characterized by the presence of malignant osteoblasts types that produce osteoid substance. As many sarcomas, they are feared because of the difficulty of the diagnosis, rapid evolution and a reserved prognosis. Its treatment is mainly surgical. The effectiveness of chemotherapy and radiation therapy have not still been demonstrated because of the rarity of this entity. We report here the case of a mandibular bone revealed by a dental abscess.

Clinical case

It is a 44-year-old patient with no significant history, the patient reported a dental pain. A dental consultation revealed the presence of a dental abscess. After medical treatment, the patient has benefited from a dental extraction, the aftereffects have been characterized by a tumefaction first endobuccal that was rapidly taking volume, all evolving in an apyrexia environment. An Endobuccal examination revealed a swelling in relation to the 46 that is developing at the vestibular level and on the outer table of the mandible [Figure 1].

An Exobuccal examination showed no trismus, positive vincent sign,

an inflammatory skin Tumefaction in the mandible, which was slightly painful to the palpation.

A maxillofacial CT showed the presence of an aggressive right mandibular process .

A maxillofacial MRI showed a right mandibular tissue process with an extension to the floor of the mouth with infracentriform cervical ganglia [Figure 2].

The biopsy revealed a histological as well as an immunohistochemical appearance of an Osteoblastic osteosarcoma[figure 3]. The expansion record proves to be negative mainly a bone scintigraphy and thoracoabdominal CT. The biological examination shows no particularity.

Discussion

Maxillo-mandibular osteosarcoma has a poor prognosis despite a multidisciplinary diagram therapy. It is the case of a rare tumor, 10% being located at the maxillofacial level [3]. The discovery is noticed at a later age than the one in the long bones: 35 years on average with a moderate frequency peak after 50 years [8].

As Bennett et al. [8], this disease can affect both the male sex as well as the female one [9,10, 11], the nonspecific oral swelling is the usual sign of discovery, note that our patient reported a tooth swelling related to a dental abscess that has motivated the discovery of his illness. Other authors report a prevalence of 100%[11].

The bone is characterized by sarcomatous osteogenic tissue, laid in an anarchic way, produced by malignant osteoblasts type or rather by undifferentiated mesenchymal precursor cells with osteogenic potential [12,13]. This tumor is generally of a heterogeneous polymorphous appearance present in variable amounts of fibroblastic, osteoblastic and chondroids zones.

The regional and general locomotory record of the maxillofacial bones has progressed over the years. It now regularly includes: a dental panoramic, an MRI (pre-surgical target specifying bone marrow infiltration and a soft tissue invasion).

A cranial and thoracic abdominal CT scan or from the outset, a PET-SCAN (or a bone scan), our patient received an MRI and CT maxillofacial, a bone scintigraphy and a thoraco abdominal CT as part of the extension assessment.

A Complete surgical excision with healthy margins is the only effective treatment. The use of pre- or postoperative adjuvant therapy is dependent on prognostic factors, but there hasn't been any general consensus yet due to the rarity of this affection [14].

The factors of poor prognosis are as follows:

Positive margins of excision, tumor size greater than 6 cm, high malignancy grade, age older than 60, the location other than mandibular and osteoblastic type [14]. Metastases occur in 10 to 20% of patients.

The five-year survival after carcinologic excision is 23-37% [15]; we have also found a case of 14 year-survival of a surgically treated mandibular chondroblastic osteosarcoma [16]. Pre-and post-chemotherapy is more controversial in maxillo-mandibular localizations than in the long bones [14,13].

In our case, we opted for a first type API AI chemotherapy used in the treatment of classic bones given the aggressiveness of the disease in order to get a good answer allowing a complete oncological surgery that can guarantee an extended survival.

Conclusion

The mandibular localization of osteosarcoma is rare. The diagnosis is first oriented by the clinic and the radiological explorations then an evidence is provided by the histological examination.

The carcinological excision improves the prognosis but poses the problem of reconstruction which must ensure the function and aesthetics. The importance of both chemotherapy and radiation therapy are not well recognized given the scarcity of cases and the absence of trials evaluating the interest of these therapeutic options in dealing with this disease.

Declarations

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Availability of data and materials

All data generated or analysed during this study are included in this published article. The authors presented all the necessary information about their case report in the manuscript. However, about the literature review, all used literature was referenced appropriately in the "References" section.

Authors' contributions

AD designed and wrote the paper. SY, KS, HC, MI participate in medical treatment. MI and HE designed the paper. All authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

Ethics approval

N/A

Consent to participate

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Figure 1 : image showing a mandibular tumefaction



Figure 2 : A maxillofacial MRI showed a right mandibular tissue process with an extension to the floor of the mouth with infracentrifrom cervical ganglia

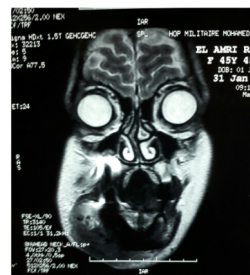
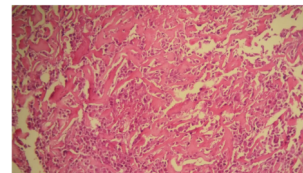


Figure 3 : Photomicrograph showing a conventional osteosarcoma producing osteoid. Hematoxylin-eosin x 250



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