

Mandibular Ameloblastoma: A Reported Case

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DOI: <https://doi.org/10.36347/sjmcr.2024.v12i09.018>

| Received: 01.08.2024 | Accepted: 06.09.2024 | Published: 10.09.2024

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Abstract

Original Research Article

Ameloblastoma is a benign aggressive odontogenic tumor which requires early diagnosis and appropriate treatment. It commonly affects the mandible and radical surgery is the gold standard treatment. We report the case of a patient with ameloblastoma in extremely advanced phase affecting the retromolar trigone who was treated with concomitant chemoradiation therapy. Mandibular ameloblastoma is not well documented in the literature. It is usually diagnosed at the later stage when optimal surgery cannot be performed. This case study aimed to demonstrate that radiation therapy is a real therapeutic alternative in the treatment of advanced and inoperable forms of ameloblastoma.

Keywords: Mandibular Ameloblastoma, Tumor, Mandible and Radical Surgery, Chemoradiation Therapy.

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INTRODUCTION

Ameloblastoma is a rare benign odontogenic tumor of an aggressive nature which most often occurs in the mandible. It progresses slowly but is characterized by frequent recurrence, mainly after conservative surgery [1]. We report the case of a patient with ameloblastoma of the mandible treated with conformational radiotherapy. This case illustrates the value of radiotherapy in the treatment of ameloblastoma.

MATERIALS AND METHODS

We present a case of a 62-year-old man affected by ameloblastoma treated conformational 3D radiotherapy.

RESULTS

The patient was 62 years old and presented with an intraoral lesion Figure 1 that had been evolving for eight months. The cervicofacial scan showed presence in the retromolar area and in the right masticatory space opposite the endo-gingival surface of a well-limited, oval-shaped lesion formation measuring approximately 30 x 21 x 36 mm vs 31.5x19x26 mm (APxIXCC).

* Topographically, this formation has the following relationships:

Medial: it comes into intimate contact with the right wall of the fixed portion of the tongue and bulges into the pharyngeal mucosal space. Externally: it causes lysis of the medial cortex of the right mandibular ramus,

with cortical rupture. Superiorly: it comes into intimate contact with the homolateral external pterygoid muscle. Below and behind: it remains at a distance from the homolateral submaxillary gland, respecting the oropharyngeal fat. Bilateral sub-Angulo mandibular and high jugulocarotid adenopathy's. The most voluminous is the site of a central zone of necrosis and measures 21 x 16.7 mm (left jugulocarotid).



Figure 1: Clinical presentation of mandibular ameloblastoma

CAT scan revealing no abnormality. Biopsy and anatomopathological study revealed an ameloblastoma with no sign of malignancy Figure 2.

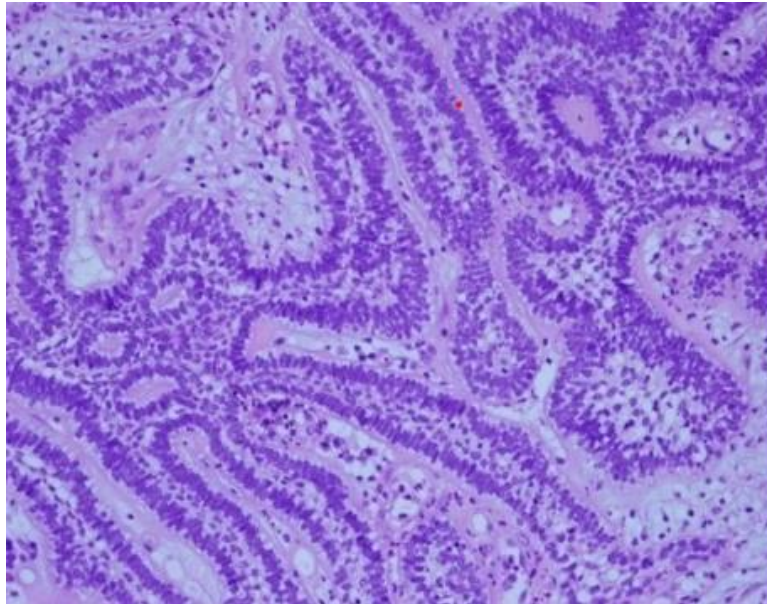


Figure 2: Histological images showing an ameloblastoma with no sign of malignancy

This case was discussed at a multidisciplinary consultation meeting. Radical excision was technically difficult given the size of the tumor and the proximity to critical organs. Conformal radiotherapy was chosen. Irradiation was by conformal radiotherapy 3D at a dose of 60Gy, 2Gy/session and 5 sessions/week with high-energy 6MV high-energy X-ray photon. This allowed better conformation of the dose to the tumor mass with good organ preservation of organs at risk.

Progression was marked by a bad clinical and radiological response. A CT scan performed three months after the end of radiotherapy showed Persistence and increase in size of the lesion process centered on the right mandible, delineating areas of necrosis within it, blowing and lysing bone, and measuring approximately 86 x 66 x 87 mm vs 30 x 21 x 36 mm (APxTxCC). Bilateral sub-Angulo mandibular, high jugulocarotid and supra-clavicular lymphadenopathies, with central necrosis, the largest measuring 17 x 14 mm (Ib right). Dense intraparenchymal and subpleural pulmonary nodules and micronodules with lobulated and spiculated outlines, some of which are scattered over the two lung fields, creating a balloon-like image, some of which are excavated and bulky in size: Dorsal segment of the para-scissure LSD: 15 mm Right Fowler: 14 mm

DISCUSSION

Ameloblastoma is a benign odontogenic tumor that is aggressive and potentially recurrent. It accounts for 1% of tumors [2]. The median age of onset is 35 years, with a slight female female predominance. The lower jaw is affected in in 80% of cases [3]. The circumstances of discovery are dominated by facial deformities and dental falls. The tumor is painless in the majority of cases. The most characteristic radiological is that of 'soap bubbles', indicating polygeodic bone destruction blowing the bone cortex [4]. The risk of

recurrence is between 50 and 72%. It is after conservative surgery. Radical treatment consists of wide resection with healthy margins of 1.5 to 2cm. This results in local control rates of over 90% [5]. Except this optimal surgery is not always possible, especially when the diagnosis is made at a late stage, particularly in the maxillary forms.

However, radiotherapy has also found its place in the treatment of treatment of ameloblastoma. Reynolds published the first case of irradiated ameloblastoma and proposed radiotherapy for locally advanced locally advanced tumors that are not operable or when surgery is refused surgery [6]. In 1984 Atkinson published a series of patients treated patients treated with radiotherapy with a good outcome [7]. Since then, other observations on the role of radiotherapy in the curative treatment of ameloblastoma have been published cases of mandibular ameloblastoma that responded well to external responded well to 60 Gy of external radiotherapy [8]. In this work, we present a case of locally advanced ameloblastoma of the mandibular that we treated with external radiotherapy with a dose of 60Gy at a rate of 2Gy/session and 5 sessions/week with high energy X-ray photon 6MV. This observation shows the limitations of radiotherapy in the treatment of ameloblastoma and suggests that other therapeutic targets should be sought.

With no sign of malignancy

Although cases of ameloblastoma treated with radiotherapy are rare radiotherapy is being used again in locally advanced tumours advanced tumours or when surgery is refused. Intensity modulated is a real therapeutic advance, making it possible to deliver the right dose to the tumour while protecting organs at risk while protecting nearby organs at risk.

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