

Conservative Management of Unicystic Ameloblastoma

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ARTICLE HISTORY

Received : 1 June 2021

Accepted: 21 June 2021

ACCESS THE ARTICLE ONLINE



DOI: <https://doi.org/10.37080/nmj.179>

ISSN : 2645-8438

KEYWORDS

Ameloblastoma, Surgical
Enucleation, Recurrence

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This report has never been
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CONFLICT OF INTEREST : None

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ABSTRACT

Ameloblastoma is a rare benign tumor of odontogenic origin with local invasive characteristics and a high recurrence rate. Depending upon the location, size and the subtype of ameloblastoma, surgical treatments such as marginal or segmental resection, have traditionally been implemented, but some conservative surgical methods are also being introduced, including decompression, enucleation, or curettage. We are presenting a case of 35 years' male with ameloblastoma on right side of body of mandible. Presentation of the case, surgical work up, and management are discussed.

INTRODUCTION

According to the classification published by the World Health Organisation (WHO) in 2005, ameloblastoma is defined as a benign, however, locally very aggressive tumor with a very high rate of relapse. It is composed of odontogenic epithelium surrounded by the fibrous stroma.¹ It is of epithelial origin that may arise from the enamel, remnants of the dental lamina, the lining of odontogenic cysts, or possibly from the basal epithelial cells of the oral mucosa.² The treatment of ameloblastoma varies based on the clinical, histopathologic, and radiographic characteristics. Unicystic forms are thought to be less likely to recur; however, although a more conservative approach is recommended, it is seldom adopted in practice.³ Typically, aggressive surgical treatments, such as marginal or segmental resection have been implemented, but some conservative surgical methods are also being introduced, including decompression, enucleation, or curettage.^{4,5} This case report shows the potential for favorable healing without recurrence in ameloblastoma in patients treated with conservative surgery i.e. enucleation and curettage.

CASE REPORT

A 35 years' male was referred to maxillofacial Unit, Nepal Police Hospital with a swelling over the right body of mandible. The patient was a healthy Police Personnel, non-smoker and had no underlying disease. He had first noticed the lesion about 6 months prior. It had been gradually increasing in size over the past 6 months. There was mild pain on biting but does not complain of paraesthesia to the lip or chin region or any altered occlusion. Patient also gave history of surgery performed 2 years back in some other hospital where extraction of teeth 43,44,45,46 was done. Later FPD

How to cite (Vancouver Style)

Singh S, Karki BB, Shrestha S. Conservative Management of Unicystic Ameloblastoma: A Case Report. Nepal Med Jor [Internet]. [cited 2021 Oct.01];4(1). Available from: <https://www.nmj.com.np/nmj/index.php/nmj/article/view/179>

(Fixed partial denture) prosthesis was made covering extracted teeth region. On extra-oral examination, slight facial asymmetry with swelling involving the right side of the mandible was observed. On intraoral examination of the lower jaw on the right side, an oval-shaped mass was spotted, 5x4 cm in size; palpation showed that it was firm, non-tender with no associated lingual swelling. FPD covering 41 to 47 were present. Pus discharge from the body of mandible was noted. No any enlarged lymph nodes were noted during neck examination.

An orthopantomogram (OPG) a month after 1st surgery performed in other hospital (Figure 1) showed the existence of an ill-defined radiolucent unicystic formation in the segment of right body of the mandible extending from the teeth 43 to 46. Teeth were missing from 43 to 46. Root resorption of mandibular second and third molar were not observed. (Figure 1).

Recent OPG shows the existence of expansive large radiolucent area in the right body of mandible. Stable FPD were present and around 3 mm of cortical bone in the lower border of mandible seen (Figure 2).

Under endotracheal anesthesia, the patient had an enucleation of the lesion. Aggressive curettage done in all the remaining bone tissue and around 2-3 mm bone removed with the help of large round diamond bur from the cavity wall of body of mandible. Patient was curious about FPD. So we planned not to touch FPD and lower margin of mandible was left intact. Iodine Ribbon gauze was placed in the cavity and wound was left open and dressing was done every alternative day. Postoperative defect was reconstructed by using the local mucosal flaps. Two years after the surgical intervention and regular quarterly check-ups, we noted no evidence of residual tumour. There was no paraesthesia in the lower lip and chin. Satisfactory bone healing noted (Figure 3).

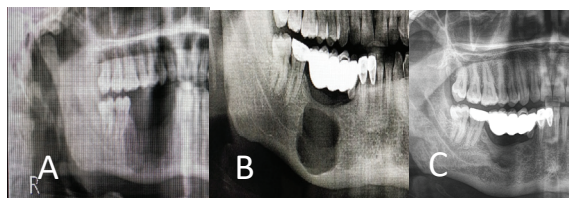


Figure 1 (A). OPG showing fairly large, unilocular radiolucent lesion in the body region of right mandible, extending from teeth 43 to 46. (B) 2

years after surgery, a panoramic view reveals slight reduction in size and margin became well-defined. (C) 1 year after second surgery (Enucleation), significant bone healing noted.

DISCUSSION

Ameloblastoma accounts for 1% of all intraoral tumors and 10% of odontogenic tumors.⁶ Around 80% of ameloblastomas are localized in the region of the angle and body of the mandible.⁷ The tumor is most common in the third and fourth decade of life, especially in men.⁸ This case report presents a conservative approach to manage ameloblastomas. This approach helps to preserve function and avoids or delays the necessity for radical surgery. Several studies have recommended conservative management depending on the macroscopic and radiological appearances.³⁻⁵ Regardless of being classified as a benign tumor, due to its characteristics of local invasion and recurrence rate, the management of patients with unicystic ameloblastoma must be carefully decided. The biological behavior of unicystic ameloblastoma tends to be less invasive when compared to the solid variant.⁹ Several surgical treatments are described in the literature, including more aggressive modalities such as marginal or segmental resection,¹⁰ to more conservative treatments such as enucleation, marsupialization, application of Carnoy's solution, or a combination of these techniques.^{9,10,11} Despite of various treatment options, the modality that will best suit the case must take into account some factors such as the histological type, clinical and radiographic characteristics, location of the lesion and its relationship with adjacent structures, age, impact psychological treatment of the patient and cooperativeness.^{11,12} Thus, we should aim at the most effective and least morbid choice for each patient. Since the relapse rate of unicystic ameloblastoma is comparatively low compared to other types, conservative surgical treatment is the preferred method to avoid extensive loss that may occur with aggressive surgical treatment.

CONCLUSIONS

Ameloblastoma in most cases is diagnosed in the advanced stage of the disease due to slow tumor progression and absence of symptoms.

As observed in this case report, marsupialization followed by enucleation had a positive effect on the patient's aesthetics and masticatory function. Moreover, not showing recurrence in a 24-month follow-up period. Eventually, multicenter and controlled studies, along with long-term follow-up periods, are needed to define the effectiveness of the treatments proposed in the literature.

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