

Prosthetic Rehabilitation of Implant Supported Prosthesis in Ameloblastoma Patient - A Case Report

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Abstract

Ameloblastoma is a neoplasm of odontogenic origin. Ameloblastoma is a slow growing, locally invasive benign tumor. Most common site of ameloblastoma is posterior mandible. It has three forms peripheral, unicystic, and multicystic tumors. Most common is multicystic form. Treatment options for ameloblastoma are conservative and radical. This case report presents prosthetic rehabilitation of a patient diagnosed with ameloblastoma treated by enucleation procedure. Patient was told for different treatment options but patient preferred fixed prosthesis. The final treatment plan was implant supported fixed prosthesis. Bicortical implants were placed in mandible and prosthesis was cemented.

Keywords: Ameloblastoma, Bicortical implants, Prosthetic rehabilitation, fixed prosthesis

Introduction

Ameloblastoma is a true neoplasm of odontogenic origin. Ameloblastoma is a slow growing, locally invasive benign

tumor of odontogenic origin. Represent 1% of all tumors and 18% of the odontogenic tumor. It has high recurrence rate. It is second most common odontogenic tumor. It may occur in all areas of the jaw but most common site is mandible.⁽¹⁾ Radiographically it appears unilocular or multilocular. Due to tumor cortical plate may expand lead to soap bubble appearance. Definitive diagnosis can be made on histopathological examination. Diagnosis of ameloblastoma is mainly based on histological examination. Treatment include both radical and conservative surgical excision, radiation therapy or a combination of surgery and radiation therapy. Most common treatment is surgical excision.^(2,3)

There are two treatment options for prosthetic rehabilitation in patients of ameloblastoma after surgery. One is implant supported fixed prosthesis and another is removable prosthesis.⁽⁴⁾ Implant supported fixed prosthesis is more successful treatment option than removable one.

Implants are used to increase support, stability and retention of the prosthesis.⁽⁵⁾

Case report

A 19 year old male patient referred to the Department of Prosthodontics for replacement of missing teeth. Patient's Medical/Dental history revealed that he was diagnosed with unicystic ameloblastoma, before 2 years, in the anterior mandibular region (figure 1). Eneucleation was done under local anaesthesia, followed by chemical cauterisation with Carnoy's Solution. Seven teeth were removed along with the lesion. Patient was given iodoform dressing. On examination, there were missing 31, 32, 41, 42, 43, 44, 45 associated with loss of hard and soft tissue in the region (figure 2). After extraoral, intraoral and radiological examination, the patient was suggested with treatment plans for (1) Removable partial denture, (2) implant supported hybrid prosthesis after placement of three bicortical implants and one single piece implant. Patient preferred the later option, as he was wishing for the fixed prosthesis. Surgical placement of dental implant was planned after taking necessary blood investigations and radiological investigations (figure 3). 4 implants were placed under local anaesthesia, to replace the missing teeth. Abutments were trimmed and abutment level impression was made using Addition Silicone impression material (Flexeed, GC) (figure 4). Models were poured with Type-IV die stone. Bite registration was done with modelling wax. Hybrid prosthesis was fabricated to replace the missing teeth and surrounding missing portion of the tissues. Occlusal correction was done and prosthesis was cemented (figure 5).

Discussion

Treatment options for ameloblastoma are conservative and radical. Conservative treatment includes enucleation and marsupialization and radical treatment includes marginal and segmental mandibulectomy. There are more chances

of recurrence in conservative treatment. In patients of ameloblastoma treated with surgery, bony architecture is usually altered along with soft tissue loss. This makes difficult to fabricate the removable prosthesis as the ridge architecture is not suitable to act as denture bearing area. Implant supported prosthesis is potentially more accepted treatment option for these patients. Implants are used to increase retention, support, and stability of the prosthesis.⁶ Implant supported prosthesis is better in function and esthetic than removable one. Implant supported prosthesis may be fixed, hybrid or over-dentures with retainer. In case of ridge resorption and soft tissue loss hybrid prosthesis is preferred.⁷ In this case implant supported fixed prosthesis was planned.

Conclusion

Prosthetic rehabilitation with implant supported prosthesis improve the quality of life of ameloblastoma patient by improving the fuction and esthetics.

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Figure Legends



Figure 1- OPG showing unicystic ameloblastoma, before 2 years, in the anterior mandibular region.

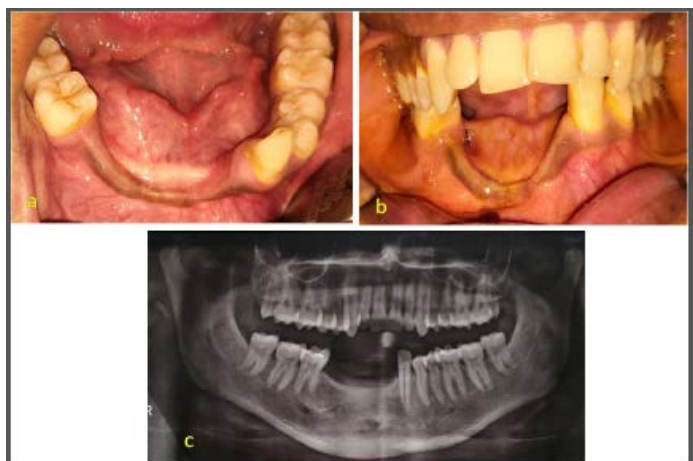


Figure 2a and 2b intraoral photographs and 2c OPG after 2 year follow-up showing missing 31, 32, 41, 42, 43, 44, 45 associated with loss of hard and soft tissue in the region.



Figure 3- pretreatment dentascan

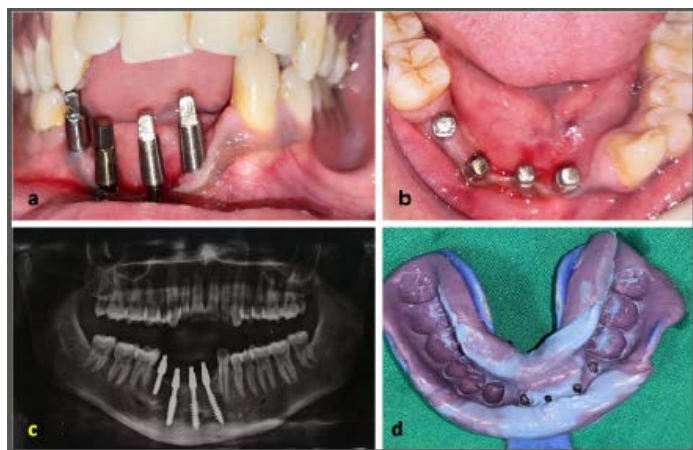


Figure 4a to 4c- 4 implants were placed under local anaesthesia, to replace the missing teeth, figure 4d- abutment level impression was made using Addition Silicone impression material



Figure 5a to 5c- final prosthesis delivered.