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MANDIBULAR IMPLANT SUPPORTED OVERDENTURE OPPOSING MAXILLARY CONVENTIONAL COMPLETE DENTURE – A CASE REPORT.

Dental Science

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ABSTRACT

Edentulous patients often experience problems with their mandibular complete dentures. Patients with resorbed mandibular ridge often complain of lack of stability and retention of the mandibular denture, together with a decreased chewing ability. The placement of implants enhances the support, retention and stability of an overdenture. As a result patients are very willing to accept a treatment plan for a mandibular implant overdenture. In comparison, maxillary implants for overdentures are not used as often and are also more difficult to place and restore.

While implant supported fixed prosthesis offers many advantages, they are very expensive and are not indicated in many conditions. Implant supported removable prosthesis can be a treatment of choice in such cases.

This case report intends to describe a patient with edentulous upper and lower arch. Since it was a case of a typical edentulous patient looking for a low cost improvement of denture retention, an implant supported overd-enture for the mandibular arch and a conventional complete denture for the maxillary arch was planned. The final restoration was stable well retained and esthetically pleasing.

KEYWORDS

implant, Over denture, Stability, Retention.

INTRODUCTION

Edentulous patients often experience problems with their mandibular complete denture. Patients with resorbed mandibular ridge often complain of lack of stability and retention of the mandibular denture together with decreased chewing ability. Insertion of implants create more favourable environment for the restoration in such patients. Implant supported prosthesis options for edentulous arch include implant supported fixed prosthesis and implant supported removable prosthesis. While implant supported fixed prosthesis offers many advantages like being esthetically pleasing and feels being actually like natural dentition, they are very expensive and are not indicated in many conditions.

An implant supported over denture is a removable complete denture combined with implants designed to improve stability in the oral environment. It constitutes a good management choice when edentulous patients are unsatisfied with conventional complete denture because they offer greater retention, support and stability. Also implant supported over denture seem to be indicated in patients who cannot afford a fixed implant prosthesis or have anatomic limitations to implants or who have phonetic or aesthetic problems as loss of lip support, very long clinical crowns or wide interproximal spaces.

As implant supported overdentures are removable denture their hygiene is very easy and although they would need often control appointments for maintenance they have a great acceptance by patients.

This clinical report describes the fabrication process for 2 implant supported mandibular overdenture. The patient did not undergo surgical procedure for improving the implantation bed before the implant placement but instead represents a case of a typical edentulous patient looking for low cost improvement of denture retention.

CASE REPORT

A 62 years old male patient reported to the department of prosthodontics , BIDSH, Patna, with edentulous upper and lower arch. Patient was edentulous since past six months due to extraction of periodontally compromised and carious teeth. The patient was informed about the various treatment modalities available. As the patient was primarily concerned about the retention of the denture it was decided to rehabilitate the patient using mandibular implant supported overdenture opposing conventional mandibular complete denture.

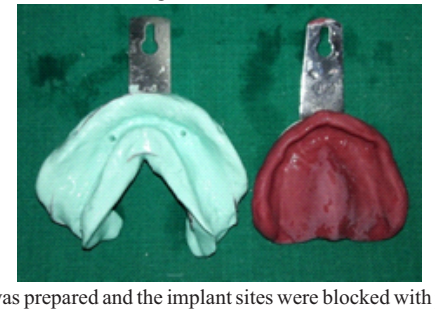
A thorough medical and dental history of the patient was recorded. Maxillary and mandibular study models were made and an OPG and CBCT was taken to assess the bone quality for selection and placement of implants.

CLINICAL PROCEDURE

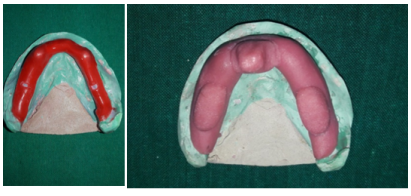
1. Two implants were placed at selected sites after proper radiographic investigations.

2. Patient was recalled after two months, after proper healing of the implant sites and evaluated. As the implants were perfectally fine , fabrication of complete denture for maxillary arch and implant supported overdenture was proceeded

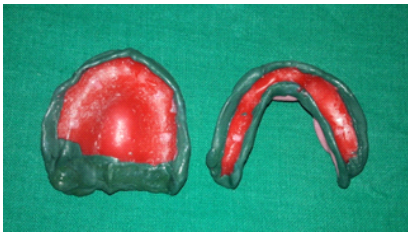
3. Primary impression of maxillary arch with impression compound and mandibular arch with alginate was made



4. Cast was prepared and the implant sites were blocked with plaster of paris

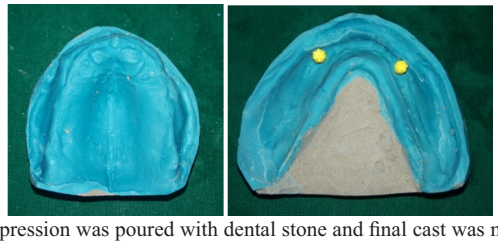


5. Spacer was adapted and special tray was fabricated with autopolymerising acrylic resin.



6. Border moulding was done using green stick impression material.

7. Final impression was made using light body impression material



8. Impression was poured with dental stone and final cast was made. The impression coping was then attached to the cast and base plate was adapted and occlusal rims were made.

9. Jaw relation was recorded

10. Try in was done.

11. Final prosthesis was fabricated using conventional method . The metal housing was incorporated in the final lower denture

12. Postoperative view of patient after insertion of prosthesis.

DISCUSSION

Complete dentures have been the standard treatment of edentulous patients from many years. Many complete denture wearers have significant problems in adapting to the mandibular prosthesis. Such complete dentures have many disadvantages such as continued ridge resorption with fibrous replacement, compromised retention and stability, displacement of complete denture during mastication, phonetics etc.

The use of implant retained denture has been an alternative for treating the edentulous mandible, since it allows fixation of the prosthesis to the

edentulous ridge. This has encouraged dental professionals to display and perform prosthesis such as overdentures retained by implants as an option to solve the problems of edentulous patients. Implant supported overdentures provide a good opportunity for dentists to improve the quality of life and oral health of the patients. The chewing efficiency with an implant supported overdenture os improved by almost 20% compared with a traditional complete denture.

The primary indication for a mandibular implant supported overdenture is problems often found with mandibular denture such as lack of retention or stability, decrease in function, difficulty in speech, tissue sensitivity and soft tissue abrasion. The number of implants incorporated are to be selected according to specific clinical and individual needs of the patient. In this case two implant supported mandibular prosthesis was planned taking into consideration the anatomical features, patients expectations and cost factor. The choice of attachments depend upon the retention required, jaw anatomy, interridge distance overlying mucosa, oral function and patient compliance for recall.

CONCLUSION

Implant supported dentures can be a simple, reliable and cost effective treatment for edentulous patients. It is used to replace missing teeth in partially or completely edentulous jaws and is a highly successful prosthodontic treatment modality as they provide the benefits of improved esthetics, phonetics, bone preservation, comfort, all resulting in an improved quality of life for the patient. This case report presents a better treatment alternative to the conventional denture. Hence this treatment modality should be practiced whenever indicated. It will preserve hard and soft tissues of the patient and give psychological relief to the patient, which he expects from the dental treatment.

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