

BASICS REVISITED WITH CONVENTIONAL IMMEDIATE DENTURE: A CASE REPORT

Amit M. Gaikwad*

Prosthodontics Crown and Bridge, Lecturer, MGM Dental College and Hospital Navi Mumbai

ARTICLE INFO

Article History:

Received 11th February, 2018
Received in revised form 20th
March, 2018 Accepted 8th April, 2018
Published online 28th May, 2018

Key words:

Immediate denture, complete denture,
removable denture

ABSTRACT

Loss of all teeth affects the physiological function of oral stomatognathic system, leads to poor esthetics and disturbs the balance of neuromuscular system. Rehabilitation of completely edentulous patient aims toward restoring function and esthetics. Thus fabrication of prosthesis should be done in such a way that it is harmonious with stomatognathic system. However most patient are afraid to state of edentulousness as it not only affect the function and esthetics but it even disturb social life of an individual. Immediate denture is good solution to such cases. Fabrication of complete denture before the extraction, prevent patient to remain without teeth. This clinical report describes a case where conventional immediate denture was planned for patient with periodontally poor maxillary anterior teeth.

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INTRODUCTION

Due to recent advances in dental therapy, patients with periodontal diseases have been helped to maintain their natural dentition for longer period of time. However at some point of time the periodontal condition of remaining teeth may collapse, so complete denture need to be considered in these patients.¹ Some patients are more apprehensive and doesn't want to remain edentulous as it affects social and bussiness activities. Immediate removable denture is a good solution for such cases.^{1,2}

Immediate denture is defined as a complete or removable partial denture constructed for insertion immediately following the removal of natural teeth.³ Most important advantage of immediate denture is that at no time patient will be without teeth so they can continue their social life without embarrasement. General apperance of patient is less affected, muscle tone and occlusal vertical dimension can be maintained are the other advantages of immediate denture.^{1,4} Immediate denture acts as a matrix as it control hemorrhage, prevents contamination and provide protection covering over the wound.^{1,4}

Limitation of immediate denture are that it requires frequent relining and no anterior try in can be carried out. So improper case selection may affect the final esthetic outcome.^{1,5} This clinical report describes rehabilitation of periodontally weak maxillary anterior teeth with conventional immediate denture.

CASE REPORT

A 45 year old male patient reported with the chief complain of poor esthetic, difficulty in eating and missing teeth since three months. Patient desire to replace missing teeth. Past dental history showed history of extraction of upper posterior and all lower teeth which were lost due to caries and periodontal reason. Medical, family and personal history was not relevant. Extra oral examination showed patient had square facial form, convex facial profile and average lip length. (Fig 1)



Fig 1 Pre operative extra oral

Intra oral examination showed completely edentulous mandibular arch and posterior edentulous maxillary arch. Generalized recession and grade 1 mobility was seen with all maxillary anterior teeth. Incomplete healing of socket was seen in region of 16 and 17 which indicated history of recent extraction. Maxillary arch was v shape and mandibular arch was of u shape with adequate inter ridge distance. Incisive papilla and palatal rougue were prominent.(Fig 2)

*Corresponding author: **Amit M. Gaikwad**

Prosthodontics Crown and Bridge, Lecturer, MGM Dental College and Hospital Navi Mumbai



Fig 2 Pre operative intra oral

Radiographic examination showed vertical bone loss with upper anterior teeth. Clinical and radiographic finding suggested poor periodontal condition of maxillary anterior teeth indicating extraction of all anterior teeth. Four treatment options of immediate denture, conventional complete denture, implant supported removable denture and implant supported fixed prosthesis. Patient disagreed for implants due to surgical intervention. Patient main concern was esthetic and was not ready to remain without teeth. So immediate denture was planned for the patient.

Maxillary primary impression was made with irreversible hydrocolloid impression material and mandibular primary impression was made with impression compound. Custom tray was fabricated on primary cast. Selective pressure impression technique was followed for making maxillary and mandibular final impression. (Fig 3) Maxillary final impression was done with regular body addition silicone and lower final impression was made with zinc oxide impression material.^{1,6}

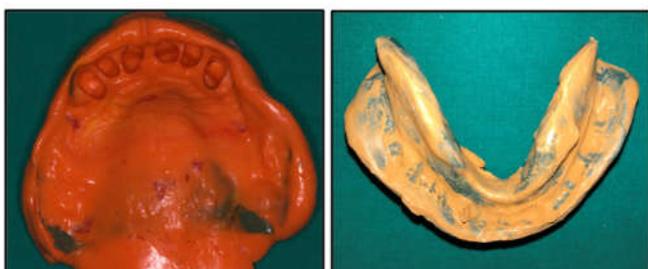


Fig 3 Maxillary and mandibular final impression

Final was poured in dental stone. Record bases along with wax rim was made on final cast and jaw relation was done. (Fig 4)



Fig 4 Jaw relation

Maxillary cast was transferred on semi adjustable articulator with facebow record and mandibular cast was transferred with interocclusal record. Lower complete arrangement and maxillary posterior teeth arrangement was done on semiadjustable articulator. Posterior trial was done in patient mouth to verify the plane of occlusion and centric occlusion.(Fig 5)



Fig 5 Posterior try in

Anterior teeth arrangement was done in sequential manner. First left side maxillary central was removed, surface of cast was made rounded and smoothen with sand paper and then artificial teeth was arranged.(Fig 6)



Fig 6 Sequential arrangement of anterior teeth

Similarly sequential teeth arrangement was done for left lateral, canine and even on right side of arch. (Fig 7) After complete arrangement waxing and carving was done and denture were processed in laboratory. After dewaxing maxillary cast was duplicated using irreversible hydrocolloid and dental stone. A clear acrylic stent was fabricated on this cast which was used to determine bone reduction during the time denture insertion.



Fig 7 Complete arrangement of teeth

Denture were finished, polished and kept in chlorhexidine mouthwash 24hrs prior to denture insertion. (Fig 8) Clear stent was also immersed and kept in chlorhexidine solution 24hrs before denture insertion.

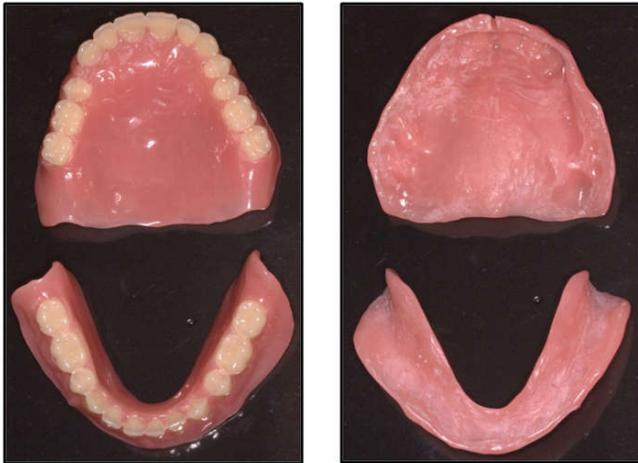


Fig 8 Final prosthesis

Atraumatic extraction of all maxillary anterior teeth was done using periosteal elevator. Socket was compressed and irrigated with chlorhexidine solution. A clear acrylic stent was placed in patient mouth and balancing of tissue was observed. Alveoloplasty was carried out in area where blanching of tissue was seen. Denture insertion was done and was evaluated for overextension, retention, stability and support. (Fig 9) Occlusal correction was carried out with help of 100micron articulating paper. All post operative instructions were given to the patient. Patient is instructed to keep the dentures in mouth for first 24hrs.



Fig 9 Post operative intra oral

An analgesic and antibiotic was prescribed to the patient. Patient was instructed to have soft diet and avoid hard and warm food for 5 days. Denture cleansing brush, chlorhexidine mouthwash and denture cleansing powder were also prescribed to patient. First recall was done after 24hrs and patient was evaluated for ulceration and healing socket. Minor occlusal corrections were carried out with 100 micron articulating paper. Patient was instructed not to remove the maxillary denture for three days. Following recall was done on 3rd day, after 1 week and after 1 month. Patient was happy and satisfied with the treatment. (Fig 10 and 11)



Fig 10 Pre operative extra oral

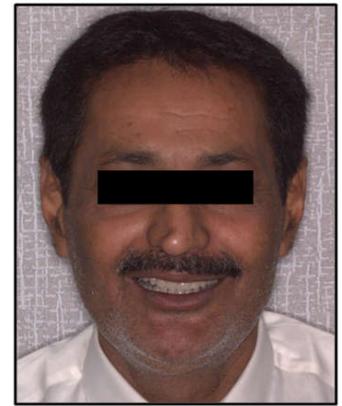


Fig 11 Post operative extra oral

DISCUSSION

The state of edentulousness, not only affects the physiological function but it even disrupts the social and business life of an individual. Immediate denture is a solution in such cases.¹ For the success of immediate denture, proper case selection, diagnosis and treatment planning is essential.^{1,3} This case was fulfilling all the criteria of immediate denture, so immediate denture was planned for the patient. Contraindications of immediate denture are maxillary prognathism, severely flared upper anterior teeth, medically compromised patient and patient with poor oral hygiene.^{1,6} In literature it is said that immediate dentures are of two types, interim immediate denture and conventional immediate denture.^{1,7} In case of interim immediate denture, only one surgical procedure is required and the denture is inserted after extraction of all teeth. The main limitation of interim immediate denture is that it needs frequent relining and a new conventional denture needs to be fabricated once the healing is completed.^{1,5} Whereas in conventional immediate denture, two surgical stages are required where the posterior teeth are removed first, allowed to heal, and anterior teeth are extracted at the time of denture insertion. In this clinical report, only upper anterior teeth were present and they were periodontally weak, so conventional immediate denture was planned for the patient. If the conventional immediate denture is properly planned, then it can be used as a final prosthesis.^{1, 2, 6} Conventional immediate denture was used as a final prosthesis as it had good retention, stability and support. In this clinical report, remaining anterior teeth were used as a guideline for replacement with artificial teeth. Sequential tooth arrangement helps us to achieve desired esthetics as anterior try-in is not possible in immediate denture.^{1,7,8} A clear acrylic stent was fabricated, which was done at the time of de-waxing. This stent was used to determine the amount of alveoloplasty needed to be carried out to prevent trauma to the denture-bearing area.

CONCLUSION

Conventional immediate denture is a good treatment option for a patient who does not want to stay edentulous or be without teeth for a longer period. It restores esthetics and phonetics of the patient immediately after extraction of all teeth. The main advantage of immediate denture is that the patient can continue their social life without embarrassment as there is no period of edentulousness. However, proper diagnosis, treatment planning and follow-up is essential for the success of immediate denture.

References

1. Zarb GA, Bolender CL. Prosthodontic treatment for edentulous patients. 12th ed. St. Louis: Mosby 2004; 12:123-59.
2. Goswami R, Singh M. Immediate denture- a spatial modeling way. *Guident*. Sept 2012; 42-44.
3. Academy of Prosthodontics. Glossary of prosthodontics terms. *J Prosthet Dent* 2005; 94:10-92.
4. Immediate Denture Service: Advantages, Disadvantages and Technical Procedures Hughes, Frank C. *The Journal of the American Dental Association*, Volume 34, Issue 1, 20-26.
5. Seals Jr. Immediate complete dentures. *Dent Clin North Am* 1996; 40: 151-167.
6. Caputi S, Murmura G, Ricci L, Varvara G, Sinjari B. Immediate denture fabrication: a clinical report. *Ann Stomatol* 2014; 4:273-277.
7. Gooya A, Ejlali M, Adli AR. Fabricating an interim immediate partial denture in one appointment (modified jiffy denture). A clinical report. *J Prosthodont*. 2013; 22:330-333.
8. Nontraumatic immediate complete denture placement: A clinical report Woloch, Michael M. *Journal of Prosthetic Dentistry*, Volume 80, Issue 4 , 391 - 393

How to cite this article:

Amit M. Gaikwad (2018) 'Basic Revisited with Conventional Immediate Denture: A Case Report', *International Journal of Current Advanced Research*, 07(5), pp. 12589-12592. DOI: <http://dx.doi.org/10.24327/ijcar.2018.12592.2217>
