

CASE REPORT

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Non Clinical Approach for a Complete Denture Rebasing

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ABSTRACT:

Maintenance of the adaptation of the denture bases to the mucosa that covers the residual ridges is a critical part of a complete denture service. The resorption occurs most rapidly in the first 6 months following extraction of the teeth and seems to level off at about 12 months. Resorption results in loss of adaptation of denture. Denture rebasing improves the fit 1 without the need of making new denture. This article describes the laboratory steps (Articulator method)² for denture rebasing.

Key words: Denture rebasing, plaster index

INTRODUCTION

Rebasing is a process of refitting a denture by replacing the denture base material. The purpose of such a process is to fill the space between the tissue and the denture base without changing the position of the teeth and the relation of the dentures.

Indications

1. Immediate dentures at three to six months after their original construction.
2. Adaptation of denture bases to ridge is poor.
3. Satisfactory vertical dimension of occlusion and coincident centric occlusion and centric relation.
4. When patient cannot afford the cost of having new dentures constructed.
5. For geriatric or chronically ill patients who will not be able to undergo the stress of fabrication of new denture.

Various relining and rebasing procedures are :-

1. Clinical procedure¹ - Static methods -closed-mouth technique^{4,5,6}
- Open- mouth Technique(Bouchers)⁷
Functional metho
Chair-side technique
2. Laboratory procedure² - Articulator method
Jig method
Flask method

CASE REPORT

A 50 year male patient reported to the Department of Prosthodontics, Kemineni Institue of Dental Sciences with a chief complaint of loose lower complete denture.

No relevant medical history . Patient was edentulous since 5 months. On examination, the patient had partially edentulous maxillary arch and completely edentulous mandibular arch.

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Procedures

Tissue Preparation includes removal of excessive hypertrophic tissue surgically. The oral mucosa must be free of irritations. Removal of the dentures from the mouth during sleep is a must for several weeks before treatment commences and the dentures should be left out of the mouth at least two to three days before making the final impression.

Denture preparation: Pressure areas on the soft tissue surface of the dentures should be relieved. Minor occlusal disharmony is corrected by selective grinding.

Once the final impression (Fig 2) was made using existing lower denture, boxing was done before pouring a cast(Fig 3).The cast was not separated from the denture(Fig4).

Lingual region of mandibular denture was filled with modelling wax/clay. Wax was also adapted on facial surface of teeth, exposing the occlusal third of the denture teeth(Fig 5). This blockout was done to prevent the index plaster from engaging undercuts of denture.

Mandibular cast was stabilized on the lower membrane of the articulator. Plaster was mixed and placed over the denture so to attach it to the upper membrane of the articulator. Modeling wax prevented the denture from being placed too deep into the plaster.

Plaster in upper membrane was acting as jig or key (Fig 6) into which the teeth could be repeatedly set to maintain a fixed distance between the cast and the occlusal surface. After the plaster was set, modelling wax was removed, denture separated from the cast(Fig 7). All the traces of impression material from the denture was removed.

The entire denture base was trimmed of leaving behind the denture teeth and around 2mm of acrylic denture base. Denture teeth were seated into the

indexed plaster(Fig 8), articulator was closed and wax up was done on the cast(Fig 9). This maintained the same position of denture teeth with denture base as they were earlier(Fig 10). Flasking, processing, finishing and polishing of denture is then done using conventional method.

Finished denture was inserted and patient was satisfied with fit of the denture base and occlusion.

DISCUSSION

The laboratory procedure used for rebasing are same as the ones used for relining. They include articulator method, flasking method and jig method. Irrespective of the methods used, rebasing differs from relining only in denture trimming prior to wax-up.²

CONCLUSION

Rebasing is an easy method of improving the fit of Denture without the need of making new denture. Specially when patient cannot afford the cost of having new dentures and / or geriatric / chronically ill patients who will not be able to undergo the stress of fabrication of new denture. This process appears to be simple but still it require astute clinical judgment and skill if the therapy is to be successful.

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Fig 1. Old denture



Fig 2. Final impression on denture



Fig 3. Boxed impression



Fig 4. Denture on cast without separation



Fig 5. Undercut blocked with wax



Fig 6. Plaster jig



Fig 7. Cast separated



Fig 8. Teeth placed into plaster jig

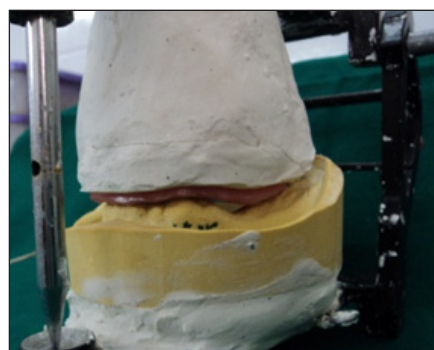


Fig 9. Jig and cast in position

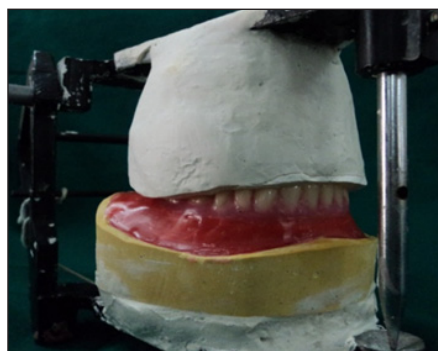


Fig 10. Wax up



Fig 11. Wax up completed