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Research Paper

Solving the Dilemma: Relining or New Dentures???

Medical Science

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Dr. Sushma R — Reader, Department of Prosthodontics, School of Dental Sciences, Krishna Institute of Medical Sciences Deemed University, Karad, Satara, 415539 Maharashtra

Dr. Anand Farias — Associate Professor, Department of Prosthodontics, Melaka-Manipal Medical College, Manipal University

Dr. Shubha R. Joshi — Reader, Department of Prosthodontics, School of Dental Sciences, Krishna Institute of Medical Sciences Deemed University, Karad, Satara, 415539 Maharashtra

ABSTRACT

We as dental professionals come across the problem of dealing with patients complaining of loose dentures. The reasons could be numerous like alveolar ridge resorption which is a physiological process or the operator induced reasons like faulty border molding or excess trimming or polishing of the dentures. Hence, we as health providers always seem to be in a dilemma of relining the existing dentures or make a make new pair of dentures. With the evidence based studies we should be in a position to choose between relining the existing dentures or fabricate new dentures for the patient complaining of loose dentures.

Introduction:

The relining of a complete denture has always been treated as a complicated procedure and mostly omitted in private dental practices; however according to there exists ample number of patients who would benefit from relining of their old denture than getting a new pair of dentures fabricated (Gordon, 1970). Though considered a difficult clinical procedure, with adequate knowledge and good skill, a relined denture provides a good fit without compromising on occlusion. (Dale, Lord, & Bolender, 1967). Boucher, 2004 has written that the relining procedure solves all the problems encountered in construction of new dentures, excluding individual teeth positioning. When the occlusion and the vertical dimension of the denture are satisfactory, relining is the treatment of choice (Levin, 1976) whereas the new dentures become mandatory when the ridges have resorbed extensively and the vertical height is difficult to re-establish. (Christenson, 1971)

What is relining: To resurface the tissue side of a denture with new base material to make it fit more accurately. Relining is done to re-establish the adaptation of the denture base to the tissues and also re-establish the jaw relations.

When to reline the denture: The adaptation of the dentures and the occlusion are the essential factors to be considered. The best time for relining depends on the amount and rapidity of resorption of the residual ridges.

Indications for relining (Levin, 1976; John A Hobkirk, 2012; David & Bowman, 2004)

- The vertical dimension of occlusion is correct or slightly decreased.
- The centric occlusion is in harmony with centric relation.
- The esthetics is acceptable.
- The teeth are not too worn or broken.
- The teeth are properly related to the ridge(s)
- The occlusal plane is correct.
- The resin is in reasonably good condition, and the color is correct.
- Immediate dentures at 3-6 months after original construction.

Contraindications for relining: (Boucher, 2004; Levin, The relining of complete dentures, 1976; David & Bowman, 2004)

The vertical dimension of occlusion is increased or extensively decreased.

The centric occlusion is not in harmony with centric relation.

- The esthetics is not acceptable.
- The teeth are badly worn or broken.
- The teeth are not properly related to the ridge(s).
- The occlusal plane is incorrect.

The patients who would better served with relining dentures than a new denture: (Boucher, 2004; Levin, The relining of complete dentures, 1976; David & Bowman, 2004)

- Patients suffering from chronic illness.
- Extremely aged patients
- Psychologically handicapped patients
- Economically handicapped patients.

Diagnosis and Preparation of the oral cavity:

The tissue underlying the denture should be in a healthy condition before attempting relining. Frequent temporary relines with tissue conditioners will be necessary to get the inflamed tissue into a healthy state. (Lytle, 1957). The dentures should be left out of the mouth for at least two to three days before making final impression. (David & Bowman,2004)

Preparing the denture base for relining:

All the existing undercuts of the denture base should be eliminated before the impression procedure. The borders of the denture should be cut down if they are too long. The vibrating lines and the posterior border are also corrected if necessary (Christenson, Relining techniques for complete dentures, 1971). Nagle and Sears (1962) recommend boiling the dentures for 5 minutes before relining them to minimize the internal strains in the base materials.

Impression materials used for relining:

Conventional zinc oxide eugenol with or without border molding depending on the fit of the borders, rubber base impression materials (light body for the impression and heavy or the medium body for the border molding), tissue conditioners and the soft liners in case of temporary relining.

Relining techniques: Various authors have put forward their techniques for relining a complete denture. (Boucher, 2004; David & Bowman; Dale, Lord, & Bolender, 1967; Levin, 1976). For this clinician in her or her practice it would be easier to follow the technique given by Chase (1960):

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After the mouth and the denture base preparation, individual impressions of the upper and the lower arches are made using the rubber base impression materials. Escape holes are provided in the upper denture to prevent forward displacement of the denture. The upper denture is relined first so that it controls the position of the mandibular denture. The patient is cautioned to use only slight force and tap the teeth .Increased occlusal pressure squeeze the excess impression out leading to distortion.

Factors to be evaluated after the clinical reline procedure (David & Bowman, 2004)

- Vertical height should not be increased
- Maxillary denture should not be allowed to move
- Centric relation should coincide with centric occlusion
- Equal thickness of impression material should be used

The major disadvantage of the relining technique is increase in vertical dimension of occlusion. To overcome this the laboratory wing relining technique (Christenson, 1969) can be followed. It is a simple effective laboratory technique which helps in controlling the alterations in the vertical dimension by adding resin wings to the denture. The wings fit in the corresponding groove in the land of the cast. This allows the accurate positioning and maintenance of the denture following the removal of the impression material. As per a study also conducted by Christensen (1971) the variation in changes in vertical dimension was less than 0.1% using wing relining technique.

Summary and Conclusion:

Relining is not a technical substitute for a new denture but when indicated this is the treatment of choice. Most failures occur by a lack of attention to the original faults and/or by careless procedures. Correct treatment plan, Proper clinical and the lab technique ensures a good outcome.

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