

A SIMPLE TECHNIQUE OF FABRICATING A ROTARY ABRASIVE WHEEL FOR FINISHING SOFT PROSTHETIC APPLIANCES

Abhinav Gupta¹, Abhishek Kandwal²

1.Asst.Professor, Department of Prosthodontics, Dr. Z.A. Dental College, A.M.U., Aligarh, India

2.Assistant Professor clinical Incharge Periodontics, Oral Implantology & Oncodontology Division Dental Surgery, Department Cancer Research Institute, Himalayan Institute Of Medical Sciences, Dehradun

ABSTRACT:

A smooth surface finish is clinically necessary because the presence of surface irregularities from poor finishing and polishing can lead to staining, plaque retention, gingival irritation, recurrent caries, abrasiveness, wear kinetics, and tactile perception by the patient. Soft prosthetic appliances as thin vacuum formed matrix or permanent soft liner impression surface of complete denture require proper finishing of the edges and surface for patient perceived comfort during wearing of the appliance. This article describes a simple and cost effective technique of fabricating a rotary abrasive wheel for finishing soft prosthetic appliances.

Keywords : Finishing , Polishing , Soft prosthetic appliances.



INTRODUCTION:

Proper finishing and polishing of prosthetic appliances are important aspects of clinical prosthetic dentistry for both esthetics and longevity. Residual surface roughness, associated with improper finishing and polishing may result in excessive plaque deposition, gingival irritation, increased surface staining and poor or suboptimal esthetics of the prosthesis.^[1]

Thin vacuum formed thermoplastic materials are used for variety of purposes in dentistry, including as matrix for provisional restorations for vertical and horizontal space assessment, or as surgical guides for implant placement, crown lengthening and other preprosthetic surgical procedures.^[2]

Soft prosthetic appliances as thin vacuum formed matrix or permanent soft liner impression surface of complete denture require proper finishing of the edges and surface for patient perceived comfort during wearing of the appliance. The junction between a long-term, resilient denture liner and the denture base is difficult to finish and polish due to differences in the hardness of the materials.^[3]

PROCEDURE:

This article provides a simple method of fabricating a finishing rotary abrasive wheel from scouring pads used in cleaning kitchen utensils and household items.

1.The scouring pad is first cut into a rounded circle of four centimeter diameter with the help of a sharp scissor.

2.This rounded abrasive wheel is attached to the shaft of a commonly available mandrel.

3.It is secured in place with the help of 3M soflect abrasive discs on the top and bottom surface of the abrasive wheel.

4.This entire assembly is finally screwed to the mandrel shaft. Soflect discs were used

to prevent the run out of abrasive wheel during function (Fig.1).

5.Rotary abrasive wheel may be now readily used for finishing and polishing margins of vacuum formed trays or soft lined dentures (Fig.2).

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FIGURES:



Figure 1: Rotary abrasive wheel fabricated from scouring pads

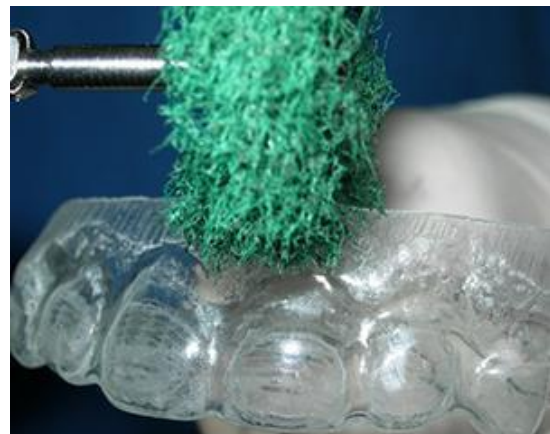


Figure 2: Finishing margins of vacuum formed matrix with rotary abrasive wheel