

CUSTOMIZED OCCLUSAL PLANE ANALYZER: TO DETERMINE OCCLUSAL PLANE IN IMMEDIATE DENTURE PATIENTS

Abhishek Jain¹, Dharmendra Kumar Sinha²

1. Prosthodontics & Consultant Implantologist, Private Practitioner, Ashirwad Dental Care, Hapur, India

2. Prosthodontics & Consultant Implantologist, Private Practitioner, Dental Lifeline, Ranchi, India

ABSTRACT:

Dentists have faced the challenge of providing harmony between function and esthetics especially in patients willing to undergo for immediate denture. The occlusal plane, lost in completely edentulous patients, should be relocated if complete dentures are to be esthetically and functionally satisfactory. Change in the plane of occlusion, modifies the physical and functional relationship of the oral musculature leading to an alteration in function, comfort and also the esthetic value. This paper describes a customized occlusal plane analyzer to check for the parallelism of the occlusal plane in respect to ala-tragus line and interpupillary line in patients requiring immediate denture.

Key words: Fox's plane, Inter-pupillary line, Camper's line

INTRODUCTION:

Traditionally occlusal plane is made parallel to interpupillary line anteriorly and Camper's line posteriorly by repeated checking of occlusal rim plane in patient's mouth with fox's plane or numerous other devices and modified until the desired occlusal plane orientation is achieved.¹ But in patients undergoing for immediate denture treatment, orientation of occlusal plane has always been difficult due to the presence of few remaining teeth (Figure 1). So, some modifications are needed to the conventional procedure.

CASE DETAIL:

Procedure:

- 1.) Make the patient sit in an upright position, looking straight ahead with Ala-tragus line parallel to the floor. Place maxillary occlusal rim in

patient's mouth and mark the future anterior plane in accordance with the esthetics, labial fullness and lip support in conventional manner.

- 2.) Conventional fox's plane is customized by relieving the areas where natural teeth are present.(Figure 2)
- 3.) Place the customized fox's plane in the patient's mouth. (Figure 3)
- 4.) Check for the parallelism of the future occlusal plane with the inter-pupillary line anteriorly (Figure 4) and Ala-tragus line posteriorly (Figure 5) with the help of a metallic scale.
- 5.) Centric relation is recorded. (Figure 6)
- 6.) Immediate Complete Denture insertion in the conventional manner. (Figure 7)

CONCLUSION:

The customized occlusal plane make it possible to determine the future occlusal

plane in the patients willing to undergo for immediate denture in a cost-effective, time saving and in a more precise manner.

REFERENCES:

1. Fox FA (1924) The principles involved in full upper and lower denture construction. Dent Cosm 66:151

FIGURES:

Fig.1 Pre-operative (*Frontal view*).



Fig.2 Modified (customized) Fox's Plane.



Fig.3 Modified (customized) Fox's Plane placed in patient's mouth.



Fig.4 Occlusal plane is made parallel to the interpupillary line anteriorly.



Fig.5 Occlusal plane is made parallel to the Ala-tragus line posteriorly.



Fig.6. Jaw relation recorded.



Fig.7 Final Prosthesis *in situ*, immediately after extractions of the remaining teeth.

