"ACCURACY OF IMPRESSION, FIT OF PROSTHESIS AND ABUTMENT COMPATIBILITY WITH INTERCHANGEABLE IMPLANT SYSTEMS.

AN IN VITRO STUDY"

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Dr. Mriganka Rabi Goswami

Department of Periodontology and Oral Implantology
S.D.M. COLLEGE OF DENTAL SCIENCES AND HOSPITAL,
DHARWAD

Abstract

Background and Objectives: Fixation screws laboratory components and tools can be used interchangeably between different, implant systems with similar connections. Thus, this study aimed to determine, the accuracy of impression technique by interchanging the components of different implant systems and the accuracy of fit of cast implant superstructures on interchanging components of different implant systems.

Methodology: A mandibular single molar missing mold was issued and epoxy models were made out of it. Standard drilling protocols were followed and one implant each of 3.75mm diameter was placed. Consecutive impressions were made using impression post of the same system and also by interchanging the impression posts. Half the impressions were connected to the lab analog of the same systems and half were connected with interchanging the analog to the other systems and the master models were made. Screw retained metal crowns were fabricated and a total of 10 screw retained metal crowns (n= 10) were tested per sample group assigned.

Results: Upon interchanging the components between BIOH and MIS, when we checked for the fit of superstructures, no significant difference was found. ($p > 0.05$) Whereas, there was a significant difference ($p=0.0019$) found when the accuracy of the impression technique was compared on interchanging the components to that of the MIS original.

Conclusion: Dental implant components with similar connections can be interchanged for procedures such as impression making.

Keywords: dental implants, impressions posts, lab analog, interchangeable implant components, accuracy of fit, accuracy of impression.