Stress analysis for mandibular screw retained full arch prosthesis, all in 4 concept, with different cantilever extension.

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Method Article

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Abstract

Compare the stress distribution pattern in two different cantilever length in mandibular screw retained prosthesis by computing the distribution of stresses in Bone/implant interface in different zone, magnitude and Direction of force applied using finite element analysis software.

Introduction

The main objective of this study is to Compare the stress distribution pattern in two different cantilever length in mandibular screw retained prosthesis by computing the distribution of stresses in Bone/implant interface in different zone, magnitude and Direction of force applied using finite element analysis software

Reagents

1. Prof.Dr . Hamdi Abo Alfotoh (Main supervisor) ☐ Professor in department of removable prosthodontics- Cairo university ☐Main supervisor ☐Responsible for data auditing, study selection , and Data monitoring

2 . Dr . Doaa Amr (co-supervisor): ☐ Lecturer in department of removable prosthodontics- Cairo university ☐ Co-supervisor ☐ Responsible for data auditing, and Data monitoring

Equipment

3D Object modeling

Finite element analysis software

Procedure

Calculated sample size

Eligibility criteria

Intervention :

-In the control group: Edentulous mandible will be restored with screw retained overdenture by four implants with 10mm cantilever length . -In intervention group: Edentulous mandible will be restored with overdentures retained by four implants with 16mm and 20mm cantilever .

Meshing

Defending the material properties

Troubleshooting

Time Taken

Anticipated Results

Stress distribution in implant\bone interface

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Acknowledgements

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