

30.

Casting and Mechanized Titanium Restorations

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INTRODUCTION: New materials and methods for clinical dentistry are continuously being introduced. There is a growing interest in the use of titanium as a restorative material for several reasons: its relatively low cost, favorable physical properties and biocompatibility. However, titanium is technically more difficult to handle than conventional metal alloys. There are two fabrication methods for titanium restorations: casting and mechanized (a combination of machine duplication and spark erosion-Pro-cera method).

PURPOSE: The aim of this review was to evaluate the advantages and disadvantages of the two fabrication methods used for titanium restorations and to make some recommendations on the indications.

MATERIAL AND METHODS: Dental literature was reviewed including clinical and technique articles on the use of titanium in prosthodontic restorations.

RESULT: The use of mechanized titanium has more restrictive indications than casting, but assures better marginal fit of the restorations. The bond strength of porcelain fused to titanium is questioned, because of the lower rigidity of titanium than conventional alloys and discrepancies in the thermal expansion coefficient between titanium and ceramic. Thus, low fusing ceramics tend to predominate today. The esthetic result varies. Furthermore titanium restorations require a qualified dental technician.

CONCLUSION: It can be concluded that titanium is a promising alternative for prosthodontic restorations. Several error sources associated with casting can be eliminated with mechanized titanium restorations. However, little information is available on the clinical performance of titanium restorations. More clinical prospective studies are necessary before titanium can be recommended for general clinical use.

31.

The CAD-CAM System in the Construction of a Telescopic Prosthesis Over Six Implants

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INTRODUCTION: The CAD-CAM system provides the possibility of making titanium framework with great precision and without deformations which can take place in clinical techniques.

AIM OF THE STUDY: The objective was to analyze, through a clinical case, the use of the ALL-IN-ONE system.

MATERIAL AND METHODS: In a female patient, 50 years of age, we installed six osteointegrated implants in maxillary bone. After the integration period we decided to construct a telescopic prosthesis with the All-in-one system due to the inclination of the implants. We took impressions by a method that splints together the abutments. With the model obtained we made a primary structure in titanium, compensating the vestibular direction of the implants, and over this primary structure we made a secondary telescopic metal structure, designed with the dental shape, that was obtained by frictional means and the use of three "Ipsoclip" retainers.

RESULT: The CAD-CAM system seems to be an excellent system for providing a good fit in complex metal frameworks from the clinical point of view.

32.

Effect of Intraorally Used Surface Treatment Methods to Improve Resin Composite Bond Strengths

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The use of resin composite restorations might require repairs to prolong the service life of such restorations. The aim of this study was to evaluate the effect of 3 surface treatment methods on the shear bond strength (SBS) of a