



Temporary Abutment Designs for Implant Supported Provisional Restorations

Tanatorn Asvaplungprohm*, Gebin Zhu, Klenis Paranhos, Zahra Bagheri, Mitchell Bloom, Stuart J Froum, Sang-Choon Cho
Ashman Department of Periodontology and Implant Dentistry New York University College of Dentistry

ABSTRACT

Fabrication of provisional restorations is an important factor in achieving successful implant restorations. Provisional restorations are used to evaluate esthetics and function before fabrication of permanent restorations. They contribute to satisfactory aesthetic outcomes by maintaining occlusal space and shaping gingival contour. Provisional restorations can also be used to as a tool to communicate the esthetic demands between technicians, patients, and dentists. Therefore, clinicians prefer chair-side provisional fabrication to allow immediate patient feedback. However, the fabrication of a provisional restoration is a time-consuming procedure which can be frustrating to dentists and patients. Therefore, it is

crucial to have proper temporary cylinder designed to enhance provisional restoration fabrication in a chairside manner. A well-designed temporary abutment should have the following characteristics: biocompatible, prevent bacterial infiltration to implants, promote bone healing, convenient to install and unload and esthetically pleasing. The design of the temporary abutment involves multiple factors such as prosthetic, surgical, biological, and esthetic considerations. The GT (Gebin & Tanatorn) abutment is designed considering the above factors. The purpose of this presentation is to discuss the required factors of a novel temporary abutment design and include the following:

PREVIOUS TECHNOLOGY

Previous temporary cylinders were developed by an engineer. However, modifications are made **to better suit clinician's chair side manner**. Modifications are made as shown in the table.

	Straumann Abutment	GT Abutment
Length	11mm	15mm
Retentive Groove Design	Vertical/ horizontal	Horizontal
Gingival Shape	Shouldered	Flat
Coronal Shape	Flat	Slanted
Materials	Titanium	Titanium/ Peek

CLINICAL SIGNIFICANCE

Chair-side fabrication of provisional restoration can be more predictable and less time-consuming

BUSINESS SIGNIFICANCE

This design can be guide lines for all implant supported temporary cylinders

FUTURE CONSIDERATIONS

- Can apply to 3-D printed design for chair-side fabrication
- Can fabricate universal temporary cylinders

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