

RESTORATION OF AN IMPLANT WITH MODIFIED IMPLANT-ABUTMENT INTERFACE USING DIGITAL METHODS: A CASE REPORT

Introduction

Due to mechanical and/or biologic complications, implant-supported restorations may need to be redone or extended. The identification of implant company and type, as well as potential damage of implant-abutment interface or components is a common problem that has to be resolved.

Case Description

A male patient visited the dental office complaining of bleeding around an implant restoration consisting of three splinted crowns on 024-025-026. After peri-implantitis was diagnosed and treated, the replacement of the restoration was deemed necessary. The implant company was identified using information provided by the previous dentist. Radiographic examination revealed the absence of a retaining screw for the crown at 025. The attempt for intraoral scanning failed, as the fixation of a compatible scan body on the internal hex of implant crown at 026 was impossible. Scan bodies of the same company with different features were tried unsuccessfully. Scrutinized observation of the implant revealed that the inner surface of the internal hex had been modified with a dental bur, possibly in an attempt by the previous dentist to seat the pre-existing restoration. A suitable non-rotating titanium base was connected to the implant at 026 and an intraoral scan was obtained using scan bodies for the rest of the implants. Crowns on 024 and 025 were digitally designed using the appropriate libraries, while the crown on 026 was designed to passively seat on the titanium base. All crowns were splinted. The restoration was screw-retained on implant 024 and a 17 degree multi-unit abutment was used for implant 025, in order to correct the tilt. The cantilevered crown on 026 was cemented intraorally with resin cement on the titanium base.

Discussion

This technique enabled the use of the implant 026, despite its internal hex deformation, which could render it inactive. The integration of digital technologies in the clinical practice expands its possibilities and facilitates dealing with technical problems.