Titanium to Ceramic Dental Implants: A Short Communication

Saurabh G*

Axiss Dental Pvt. Ltd, Whitefeld, Bengaluru, Karnataka, India

Zirconia ceramics is successfully used to fabricate tooth-supported restorations and this has stimulated clinicians to encompass its application for restorations with implants. CAD/CAM technology combined with zirconia ceramic is gaining more and more popularity in implant dentistry. e introduction of zirconia implants served as an alternative to titanium implants in dental implantology. Zirconia appears to be a proper implant material due to its opacity, low plaque a nity, mechanical properties and biocompatibility [1,2].

Gingival recession and apical bone loss connected with implants many a times expose portions of the metal implant, showing the overlying gingiva's bluish discoloration. is complication is avoided by the use of zirconia implants and complies with the request of several patients for metal-free implants. Bone resorption and the in ammatory response caused by ceramic particles are less compared to those caused by titanium particles, signifying the biocompatibility of ceramics [2-4].

Nowadays most of the implant manufacturers provide zirconia abutments for restorations with aesthetic implants. Abutments are o ered in customized or prefabricated forms and may be prepared in the dental laboratory by using CAD/CAM techniques or by the technician. Zirconia's biocompatibility toward epithelial and so connective tissue is vital. Furthermore-TZP abutments can support so tissue integration, whereas promising peri-implant so tissues can be achieved clinically adjacent to zirconia healing caps and zirconia implants [3,5] (Figure 1).

In addition to strength considerations, abutments of Y-TZP implant provide metal-like radio-opacity for improved radiographic assessment, and nally condensed bacterial adhesion, in ammation risk and plaque accumulation. A methodical evaluation revealed that zirconia abutments might maintain a corresponding bone level when compared to aluminum oxide, titanium and gold ones. In one randomized and controlled trial twenty customized, non-HIPed based Zirconia single tooth implant abutment and same number of titanium single tooth implant abutments were observed for three years, with no cases of loosening or fractures in both the groups and reported 100% survival rates [6].

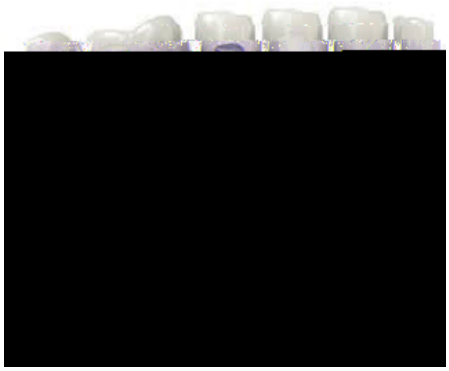

Figure 1: White zirconium implant.

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***Corresponding author:** Saurabh G, Axiss Dental Pvt. Ltd, Whiteýeld, Bengaluru, Karnataka, India, Tel: +91 9916203455; E-mail: saurabh.ravzz@gmail.com

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