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Performance of zirconia abutments for implant-supported single-tooth crowns in
esthetic areas: a retrospective study up to 12-year follow-up.
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Abstract

OBJECTIVE:

The aim of this clinical study was to assess complications, success, and survival rates of zirconia abutments from different implant designs.

MATERIAL AND METHODS:

Anterior implant-supported single-tooth restorations, after 1-12 years of clinical function, were evaluated. One hundred and fifty-eight zirconia implant abutments placed in 141 patients were evaluated. Mechanical complications were observed, such as presence or absence of abutment fractures and loss of retention. In addition, the peri-implant parameters were observed. Statistical analysis was performed using Fisher's exact tests, and bone level was analyzed using the nonparametric Mann-Whitney U-test for non-normally distributed data.

RESULTS:

Sixteen restorations exhibited different complications. However, no significant difference was observed between the standard and platform switching. The standard platforms exhibited higher marginal bone loss than platform switching design followed up to 5 years. Platform switching has a potentially higher risk of fracture in some designs. In our study, one standard platform as well as two-platform switch designs seem to withstand fracture in the anterior area, regardless of the implant width. Survival and success rates were 93.8% and 81.2% (up to >7 years ≤12), respectively, for standard platform; and 90 and 84% (up to >2 years ≤5), respectively, for platform switching.

CONCLUSIONS:

In general, standard platform implants restored with zirconia abutments were successful for the longest periods of observation and are a viable treatment alternative in anterior areas. Some of the studied designs of platform switching implants with zirconia abutments performed well for up to 5 years.

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