

Analysis of the abutment-implant platform gap in internal hex dental implants

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The aim of this research was to identify the abutment-implant gap using 20 N or 30 N torques for the abutment. A descriptive study was designed using 3 internal hex implant systems from four different companies; the implants were manipulated in a usual way, installing the respective prosthetic abutment in each platform using 20 N/cm² and 30 N/cm² torque. Then, observations were made and photos taken a LEO 1420 VP scanning electron microscope; the data were analyzed with the Shapiro-Wilk test of normality and t-test for related samples, considering a value of $p < 0.05$ for significant differences to compare the group with 20N and the group with 30N torque. Significant differences were identified between the gap in abutments installed with either 20 N/cm² or 30 N/cm², with fewer differences being observed in the latter group. There were wide variations between the study units, with reductions from 49% to 23% from the interface with the lower (20 N/cm²) to the higher torque (30 N/cm²). It can be concluded that the installation torque of prosthetic abutments influences the interface between prosthetic connector and implant surface. © 2017, Scientific Publishers of India. All rights reserved.

Abutment

Dental implant

Implant gap

Article

comparative study

dental abutment

dental microscope

dental restoration

descriptive research

scanning electron microscope

standardization

tooth implant

torque