Effect of increased crown height on stress distribution in short dental implant components and their surrounding bone: A finite element analysis

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Published Online: March 19, 2015

DOI: http://dx.doi.org/10.1016/j.prosdent.2014.11.007
Publication stage: In Press Corrected Proof

Abstract

Statement of problem

Implants in posterior regions of the jaw require short dental implants with long crown heights, leading to increased crown-to-implant ratios and mechanical stress. This can lead to fracture and screw loosening.

Purpose

The purpose of this study was to investigate the dynamic nature and behavior of prosthetic components and preimplant bone and evaluate the effect of increased crown height space (CHS) and crown-to-implant ratio on stress concentrations under external oblique forces.