

“Assessment of marginal accuracy of two different types of dental Scanners”

Abstract:

Computer aided design and manufacturing technologies are gaining more and more importance in the fabrication of dental restorations and the minimization of crown and fixed partial denture marginal gaps is an important goal in Prosthodontic. The purpose of this in vitro study is measuring marginal accuracy of the zirconia based coping fabricated using two types of dental scanner (light and laser). This study composes from two groups; Group 1: twelve samples fabricated using light scanner, Group 2: twelve samples fabricated using laser scanner, the measurement of marginal accuracy are made by stereomicroscope (at 12.5 X magnification) and result that laser scanner produced more precise marginal accuracy with mean value (42 μ m) than light scanner which produced marginal accuracy with mean value (73 μ m); also, the independent t-test showed that there is high statistical significant differences between the tested groups($p < 0.001$); the mean values for both groups considered within the clinical acceptance value. The results of this study favored use of the CAD/CAM system with laser scanner for fabricating zirconia copings, it's concluded that superior marginal accuracy values are exhibited by the laser scanner for tested zirconia crown.