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Erratum

Due to a desktop publishing error the article "Mechanical Behavior of non Veneered Three Unit Fixed Partial Dentures of Alumina-Zirconia Under Cyclic Load in Wet Environment", published at Materials Research 13(1):107-111 was printed with the following errors:

General

All occurences of "In-Ceram®" should be "In-Ceram™".

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The Abstract's second sentence should read:

Thirty four three unit fixed partial dentures (FPDs) (In-Ceram™ Zirconia BZ blanks) were grinded through a CEREC In-Lab equipment followed by glass infiltration and sandblasting.

The Abstract's last sentece should read:

The fracture mode most frequently encountered on those frameworks was through the distal connector.

The Introduction's last sentence of the third paragraph should read:

Frameworks processed via CAD-CAM in relation to the traditional slip casting are thought to have better mechanical properties due to its more consistent processing[5].

Materials and Methods' second paragraph should read:

The master model was laser scanned in a CEREC 3 In-Lab machine and its digital replica visualized in the computer screen using a specific software from CEREC 3 In-Lab (Figure 2). The connectors of master model had the following dimensions; mesial connector: 4.0 × 3.5 mm and distal connector: 3.5 × 3.5 mm. The occlusal anatomy of the pontic was especially designed to stabilize the loading sphere during the fatigue tests.

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Materials and Methods' last paragraph should read:

The frameworks that did not fractured under load cycling were submitted to a bending test in order to determine its residual strength. Scanning Electron Microscopy (SEM), X-ray Diffraction (XRD), X-ray Photoelectron Spectroscopy (XPX) and Atomic Force Microscopy (AFM) were used to characterize the morphology and phase transformations after grinding and after fracture.

Results and Discussion's second and third paragraphs should read:

The second step was to evaluate the degree of homogeneity of the FPDs after glass infiltration. Figure 5 shows an AFM image after glass infiltration. It can be seen that the glass phase was not homogeneously distributed in the alumina-zirconia matrix, probably due to its high viscosity.

Figure 6 shows the X-ray diffraction of the BZ blank after wet grinding, of the FPD after glass infiltration and sandblasting and after fracture. In spite of wet milling, the decrease in the relative intensity of monoclinic zirconia was due to monoclinic-tetragonal reverse transformation promoted by the intense heat generated during grinding. After glass infiltration followed by sandblasting and after fracture the small monoclinic peaks vanished and appeared a strong new peak which was identified as ceria crystals. This result is an indication of the relatively low solubility of ceria in the glass phase.

Results and Discussion's fifth paragraph should read:

Due to the differences in the framework processing and the cyclic load test of the present work compared to Studard el al.[12], it was difficult to relate the lifetime of those papers. From Studard et al.[12] due to the lower cyclic load (250 N), the number of cycles for 63% probability of failure (Nf,0) was 80.653 cycles with $m^* = 0.37$ compared to 59.874 cycles with $m^* = 0.48$ of the present work (Figure 7). The relatively high dispersion in lifetime data was probably due to residual stresses during load cycling mainly induced by processing (grinding, sandblasting and glass infiltration) and to stress corrosion cracking of the glass phase.

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Equation 3 should read:

$$\sigma c = K.32.\ F.\ xc / \pi.\ d3 \quad (3)$$

Results and Discussion's last sentence of the last paragraph should read:

From those data, the maximum tensile stress at the connector was 500 MPa.