

Application of the Heat-Press Technique to the Metal- Ceramic Prosthesis

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The characterization of the metal-ceramic prostheses as the gold standard of prosthetics has made them a continuous field of application for new techniques and technologies. The aim of this paper is to investigate and to suggest finally, the technique of heat-pressing the ceramic mass upon the metal substrate and its advantages in contrast to the classic feldspathic porcelain-fused-to-metal restorations, by comparing the two techniques in terms of metal ceramic bond strength, laboratory time efficiency, marginal adaptation and color stability.

What can be derived as a conclusion is that the heat-pressing technique can offer a number of advantages during the fabrication process, while there are no differences regarding metal ceramic bond between the two techniques.

Minimum acceptable bond strength value is 25 MPa in accordance to ISO 9693. Experimentally a non-statistically significant difference has been observed between the conventional technique and that of the heat-pressing technique.

One of main disadvantages in metal-ceramic restorations is the appearance of the cervical region of the abutment sometimes. This problem can be overcome by using the heat-press technique.

Factors of great interest are the surface roughness that affects dental plaque retention and the abrasion of the competing teeth. No statistically significant differences were found between feldspathic porcelain and heat-pressed ceramics. They also have less detergent ability and more color stability. Heat-pressing technique can be used with zirconium substrates with the same manner like on metal substrates [1-6].

In conclusion it found that this technique has advantages like ease of construction, reduction of laboratory time required, good mechanical properties and reduced porosity.

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