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أستاذ التركيبات السنية المثبتة

كلية طب الفم و الأسنان

جامعة القاهرة

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كلية طب الفم و الأسنان

جامعة القاهرة

بين
لاثنين

السيراميك

(عملية)

كلية

القاهرة

تمهيدا
الماجستير

(الاستعاضات السنوية)

الطبيبة/

بكالوريوس

والتكنولوجيا

لية

القاهرة

Abstract

The present investigation was designed to study the effect of two different all-ceramic crown construction techniques namely; the IPS Empress pressable, and the machinable techniques, on the marginal/ internal fit and the fracture resistance of the constructed samples. A stainless-steel die was machine milled to simulate a prepared maxillary first premolar. A total of 20 all-ceramic samples were constructed to represent two groups of 10 samples each. Each group was subdivided into two equal subgroup of five randomly selected samples for the internal and marginal discrepancy evaluation and the fracture resistance tests.

Results revealed that the highest mean marginal discrepancy was obtained by the IPS Empress Esthetic Crowns (96.7 microns), while the highest mean internal gap was obtained by the IPS Empress CAD Crowns (58 microns), and the highest mean fracture strength obtained by IPS Empress Esthetic crowns (1224.6 Newtons). Despite of the non significant statistical analysis results, a correlation was observed between the fit and the fracture resistance for the tested construction techniques.

Keywords

- Internal fit
- Fracture resistance
- Pressable Ceramics
- Machinable Ceramics
- Correlation

***Correlation between the internal fit and fracture
resistance of two different all ceramic systems
(An in vitro study)***

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**The Master Degree
in
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بسم الله الرحمن الرحيم

وقل اعملوا فسيرى الله عملكم ورسوله والمؤمنون وستروون
إلى عالم الغيب والشهادة فينبئكم بما كنتم تعملون (١٠٥)

صرق الله العظيم

سورة التوبة

Dedication

*This work is dedicated to the people in my life who
have given me so much support and love, and
because of whom my life is worth living.*

*My dear mother, the light that leads the way
My dear father, the strength that keeps me going*

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