

Evaluation of Color Reproduction of CAD –Veneered Zirconia Restorations with Different Core- Veneer Thickness Ratios and Different Veneer Translucencies

Thesis

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تقييم قدرة القشره المصنعه بواسطة الحاسوب المغطيه للتراكيبات الزركونيه بنسب سمك مختلفه بين القشره و اللب و نسب شفافيته مختلفه على استنساخ اللون

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٢٠١٢

Summary and Conclusions:

One of the most difficult challenges in esthetic dentistry is obtaining an exact color match between natural teeth and an artificial restoration making the visual recognition of the inserted restoration a difficult task even for well-trained eyes. The achievement of an all-ceramic esthetic restoration that matches perfectly with adjacent teeth is the result of the interplay between two important optical factors: on one hand, the masking capacity of ceramics to block the background color with sufficient material thickness, and on the other hand, the amount of translucency the ceramic that will allow the natural background color shine throughout a translucent material and exhibit the most natural appearance. However, the final color result is unpredictable when the restoration is composed of different layers with unspecified thicknesses, which is the case for core veneered all-ceramic restorations. Recent developments in ceramic technology and evolutionary treatment methods have all increased the predictability of all-ceramic restorations. The introduction of partially stabilized zirconium dioxide to the dental field opened new design and application limits of all-ceramic restorations allowing a minimum framework thickness of 0.5 mm with the remaining thickness of the restoration used for building the ceramic veneer.

The following study was conducted to test the color reproduction ability of zirconia restorations veneered with CAD-on

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

{يرفع الله الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ}

صدق الله العظيم

سورة المجادلة (آية ١١)

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Dedication

To my dad..... The source of my strength and support ever since the very beginning and all through the way of life. You've always been my role model and will always be.

To my mom..... The spring of love and care. She's God's gift on earth.

To my brother..... My first friend and everlasting source of support.

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"My deepest love to all of you, without having you all in my life I'd have never been here now. Wish to make you all proud of me."

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