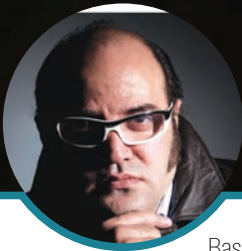


The New Revolutionary Moon Concept



Bassam Haddad, RDT

Introduction

During the past decade, zirconia has been successfully introduced into the dental labs along with new processing technology to fabricate fixed dental prostheses. It is in great demand since it's considered as a very strong material, biocompatible and lasts longer than other type of restoration.

Zirconia manufacturers have improved their material to have a natural translucent appearance so we will no longer use the layering technique, since dentists prefer the full contour for its strength.

Despite the high translucency, zirconia that has 700 MPa is still distinguishable from natural teeth. In term of aesthetics, especially for anterior teeth, shading and staining to create fake translucency are not accurate. That's what made me think of a unique concept where I design a full contour zirconia crown that I dig, on the design, in the areas where the patient has translucency in his natural teeth. After milling, I carve the space that I've dug creating holes at the green stage of the Zirconia and keep the outline on full zirconia. Therefore, I create empty spaces to build on porcelain and incisal without

compromising all the strength of a full contour zirconia crown.

Light is much better transmitted through dentine and incisal so the anterior restoration will be indistinguishable from natural teeth.

Why I called it the "Moon Concept"? It is because of the shape of the teeth after I dug the holes in them on the green stage; they look like the moon surface. Zirconia is bright and light that goes through it makes it look like coming from outer space, exactly like the moon in a dark clear sky.



Fig. 1 - Dark preparation is always a big challenge for metal free zirconia crowns to look as the natural teeth



Fig. 2 – Impression models U/L



Fig. 3 - Holes made manually with fisher burr at the green stage to define the translucent spots like the ones on the natural adjacent teeth

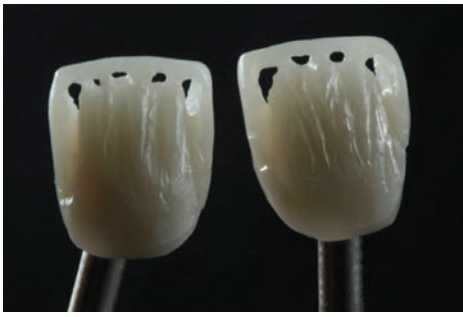


Fig. 4 - Sintered crowns with labial texture

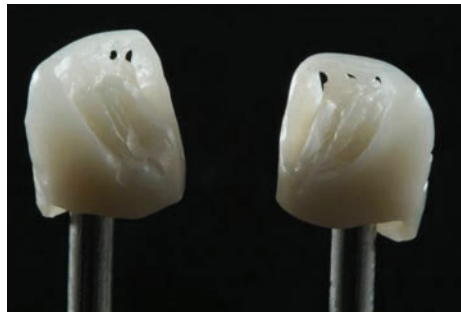


Fig. 5 - Translucency result after applying Blue X from Nacera at the green stage of one shaded zirconia



Fig. 6 - Length and width of sintered crowns already defined by the wax-up



Fig. 7 - Labial texture and translucency of sintered zirconia



Fig. 8

Fig. 8 – 9 Thin layered Transpa dentine, incisal effects filling the holes by Ceramotion ZR to make connecting firing

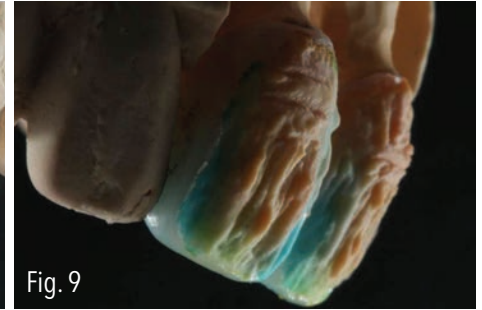


Fig. 9



Fig. 10 - After wash - bake, shape is not achieved yet. Holes are still visible at the incisal edge



Fig.11 - Diffusion of lights is obvious controlling the incisal edge



Fig.12 - Texture that looks like natural texture on natural teeth



Fig. 13 - One last bake to finalize the shape



Fig. 14 - The complete labial contour made by using translucent and incisals from Ceramotion ZR without any modification for the length and width

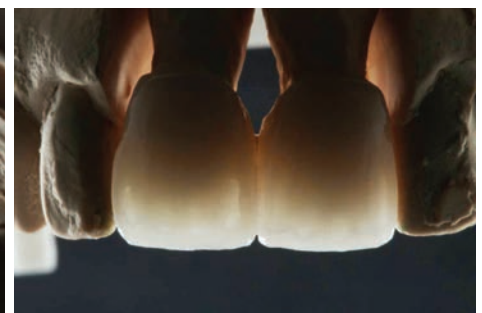


Fig. 15 - Light diffusion is obvious and natural



Fig. 16 - Palatal view.



Fig. 17 - Glazing and finishing with 3D/2D One Touch material.



Fig. 18 - Result in the mouth. Profile picture showing the lip support.



Fig. 19 - The incisal edge of zirconia contour looks exactly the same as the incisal edge of natural teeth.



Fig. 20




Fig. 21

Fig. 20 - 21 - Light passes through the translucent spots at the green stage of zirconia.



Fig. 22 - Tested on delicious juicy strawberry and result is perfect

Special thanks go to Dr. Enna Kadoch, Raphael Mandrean (clinical dental technician) and Joana Madrean. 

About the author:

Bassam Haddad is a dental technician for 27 years. He acquired a comprehensive knowledge in various systems of dental technology with the greatest masters of dental art in the world. He is the author of several local and international articles on aesthetic and restorative dentistry.

He is known to give passionate hands on courses where he shares his knowledge, own techniques and discoveries to manipulate ceramic and other materials for a natural and aesthetic result. He is, as well, lecturer in many conferences and dental meetings in North America and proudly a member of Oral Design International foundation.

Bassam Haddad is the owner of VIVACLAIR CANADA dental laboratory in Montreal.

Conclusion

As we all know, best learning for dental technician is by experiencing on his own time, trying different and new ways to manipulate the material he uses. A deep study at the research

department of the manufacturer must support and approve any new idea.

“Shoot for the moon. Even if you miss, you’ll land among the stars.”
- Les Brown