

DENTAIREVOLUTION
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Luc and Charles CV
Dentists since 1983
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Post graduate in esthetic dentistry
"Academie du sourire" members
Individual practice in Montpellier

Guillaume
Ceramist in DENTAIREVOLUTION



BIOLOGICAL MARGIN



DENTAL REVOLUTION



Sabrina first came to our office to solve an old aesthetic complex she had for 30 years. Sabrina broke her upper central incisor at the age of 10 during a trauma, and several dentists successively builded composite resin to fix the loss of substance, with aging process that occurred at varying degrees.

She always refused to be treated with full crown or veneer, because she didn't want her tooth to be destroyed even more by a dentist. She didn't know the solution she needed, but she knew she wanted a minimum invasive treatment.

Our team, Dentairevolution, composed by Luc and Charles, dentists, and Guillaume, ceramist, had the great pleasure to offer a realization that fitted her expectations; feldspathic veneer with minimum preparation under microscope.

In order to optimize the result, we offered her a full perio and dental decontamination, and then realized a teeth brightening using 10% hydrogen peroxyde agent in a night-time cure for 15 days.



We began the treatment of her teeth with the removal of the old composite resin. Guillaume guided us during the microscope-assisted preparation, as he wanted the cervical limit to allow a perfect enamel-ceramic continuity, assuring an aesthetic, conservative and long-lasting result. This margin localisation is convenient to us as it's a biological one.



« Never upset an artist »

The microscopic preparation doesn't exceed 0,2 to 0,3mm depth, using red ring bur.

We polished the prep using ceramic polishers interspersed with diamond grit. (Komet®) We didn't use anesthesia as only the enamel was prepared.

The impression was done using a modified wash technique, with P1, Precision and S4 silicon from Bisico®

Transitional phase was justified by the initial fracture of distal angle of the incisor. We realized a mock-up from the wax-up Guillaume made, using bis-acryl resin, Structure A1 (Voco®)





In order to make the feldspathic veneer, guillaume realized a Geller model and duplicate the preparation die in refractory material (Cosmo tech vest GC).

This technique is very convenient as it allow us to use different ceramic powder (Creation Willi Geller).

Opaque powder can be applied on the broken angle in order to smooth the straight transition between tooth and veneer. A mix of translucent powder / effect powder were then applied to replicate the free edge of the tooth, and the form is complete with enamel powder .



This possibility, of playing with opacity and translucency depending the area of the tooth is only possible with layering technique either on refractory or platinum foil.

Surface texture is done using stone bur and a variety of silicon rubber (Shofu) and final luster using pumice .

During the try-in, we only used a drop of water, color was perfect, all it remained to do was bond this veneer.



NicTone Rubberdam (MDC®) from 1.3 to 2.3 to conserve a global vision of the anterior sector. Adjacent teeth isolation was made using PTFE, and a double ligature with PTFE floss ties on the prepared tooth, to maximise the tightness and maintain the rubber dam away from the limit.

Particule abrasion with 27um alumina oxide, etching with orthophosphoric acid and bonding with one component adhesive (G-aenial bond, GC®) on the prepared tooth. Etching with fluoridric acid, silanisation with Monobond plus (Ivoclar-Vivadent®) and bonding with single component adhesive (G-aenial bond, GC®) on the ceramic reconstruction.



Variolink neutral LC (Ivoclar-Vivadent®) was applied on the veneer, which was then put on the tooth with an Optrastick (Ivoclar-Vivadent®), excess were removed using a brush and superfloss for inter proximal areas. Light-cure was applied for 60 seconds, and repeated over glycerin. Polymerized excess were removed with a 12 blade and a silicon tip.

Dynamic occlusion was check using articulating paper. The result is simply amazing, and the challenge of restoring only one incisor with pellicular feldspathic veneer, with a limit away from gingiva, is a success, fulfilling the demand of the patient who was the most happy, as all our team was.



BIBLIOGRAPHY

- 1- Tirlet G.,Attal JP La "No Post, No Crown Dentistry": A quelle échéance...?. Le fil dentaire déc. 2014 n°98;1-2
- 2- Magne P, Belser U. Restaurations adhésives en céramique: approche biomimétique. Quintessence2003 .
- 3- BazosP, MagneP. Bio-imitation: reproduction de la nature par imitation biomimétique fondée sur une approche histo-anatomique. Analyse structurale. Eur J Esthet Dent. 2011, Automne 2011. Vol 3, n°3, 196-207.
- 4- Gurel G, Sesma N, Calamita MA, Coachman C, Morimoto S. Influence of enamel preservation on failure rates of porcelain laminate veneers. Int J Periodontics Restorative Dent. févr 2013;33(1): 31-9.
- 5- Tirlet G, Attal J-P. Le gradient thérapeutique : un concept médical pour les traitements esthétiques. Inf Dent. 2009;(41/42):2561-8.
- 6- Weisrock G, Camaleonte G, Mansour S, Belenet H. Alternative à la couronne dans le secteur antérieur. Le Fil Dentaire déc 2014 N°98 14-18.
- 7- MAGNE P. BELZER U. Restaurations adhésives en céramiques sur dents antérieures : approche biomimétique . Paris . Quintessence International, 2003
- 8- BELSER U. Changement de paradigmes en prothèse en conjointe . Réalités Cliniques .2010 ; 21(2) : 70-95.
- 9- TIRLET G. BAZOS P. La « biomimétique » : un concept contemporain au cœur de la dentisterie adhésive. Médecine bucco-dentaire conservatrice et restauratrice. 2014. chap12 . p 117-128.
- 10- GUREL G. Les facettes en céramique-De la théorie à la pratique . Quintessence internationale ; 2005.



