Building up the vertical dimension with edelweiss VENEERs and OCCLUSIONVD

A natural easy treatment

by Dr. med. dent. Jessica J. Sidharta, Germany

Reflection

For dentists building up the vertical dimension was the normal way dental splints were fixed or removable, followed by ceramic crowns or free shaping with composite.

Over the years I mostly used composite for building up the vertical dimension, but this kind of treatment took too much time for the patients and for me as a dentist. This treatment was definitely not economical. The other way (treatment with crowns) for most patients was not financially viable, because the technical laboratories, for example in Germany, are so expensive. A recent challenge has also presented itself: most patients have became younger, particularly patients with bruxism. The younger patients have generally a smaller budget for a new vertical dimension with crowns. Of course I planned also superstructures with my Cerec machine, but then I got other problems like fracturing of Cerec crowns, if we needed a smaller vertical height.

For me preparing healthy teeth was absolutely not a possibility. Bruxism sufferers often had severely sensitive teeth, hence why I decided to not prepare the teeth before getting more sensitive teeth up to the necessity of root canal procedure.

Vertical increase of occlusion over 5 mm with edelweiss OCCLUSIONVD

A 30 years old male patient had a problem with his smile. He told us about problems in his everyday life, mainly his social life had become negatively affected. He could not laugh freely or easily and he was very ashamed of speaking or laughing in photos. Temporomandibulardisorders was not his problems, because he relieved the pain himself by bruxism and freeing up space within the occlusion. His key problem was finding the correct and saving occlusion.

The first step of our treatment was a manual functional diagnostic status to save the stasis of the patient. After we collected all information concerns, anamnesis, mandibular joint, masticatory muscles, movement of mandibular jaw, relation of upper and lower jaw and the occlusion, we knew the plan for our future treatment.

Following the maxillomandibular relationship record, the next step was to create impressions of the upper and the lower jaw and a silicon key of his habitual occlusion without external guidance. The impressions and the silicon key of the occlusion were the basics for the techni-cal laboratory. On the basis of our maxillomandibular relationship record the technical laboratory produced a dental bite splint with a new vertical dimension of 5mm. Chairside we grinded off the bite splint with relation to his occlusion in order to achieve a saved occlusion. We recommended that he wear this dental splint over night and as much as possible during the day. It is very important to check that the patient for self-observes: how are the effects for the mandibular joints and the muscles? Are these areas relaxed or stressed.

After 4 days we had an appointment to check the bite situation and grinded off a little more. The patient explained of having a comfortable occlusion feeling and relaxed muscles. He also reported, that he had a very good feeling with the new saved occlusion. We did the second appointment for checking the bite situation 1,5 weeks later, after 1 month and then every 1,5 months. Altogether he wore the dental splint for 7 months.

Getting the exactly vertical dimension from the dental splint to the edelweiss OCCLUSIONVD

After this 7 month periods we met again for the fixation of the occlusion in the new vertical dimension with easy-going mandibular joints and relaxed masticatory muscles. With a silicon key we encoded the bite splint in the occlusion and gave it to our technical laboratory. An articulation of the models was possible in the new vertical dimension. Normally we build up the vertical dimension with the edelweiss OCCLUSIONVD in the mandibular joint. But in this case, new occlusion height of about 5 mm, we decided to reline the edelweiss OCCLUSIONVDs for the upper and the lower jaw, resulting in 2.5mm in both jaws. Also we relined the edelweiss-VENEERS in the technical laboratory for reduction of the treatment time chairside.

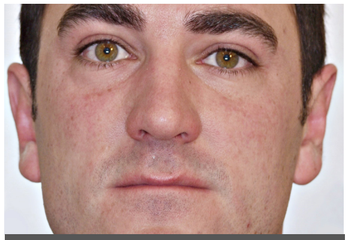
Inserting the relined edelweiss VENEERS and edelweiss OCCLUSIONVD with edelweiss dentin-body composite

In just one appointment we inserted the prepared edelweiss VENEERS and edelweiss OCCLUSIONVDs with the edelweiss body-dentin composite (colour A1). With ready relined veneers and occlusion the treatment for both the patient and dentists was fast, easy and comfortable. I started in the mandibular jaw with the molars and the premolars, one by one, from the back to the front.

Preparing the relined OCCLUSIONVD with edelweiss body-dentin composite, fixed it on the tooth and after this you have enough time for elaborating and removing the excess with dental probes or Heidemann-spatula and also with dental floss into the proximal spaces. Light cure for 30 seconds (depending on the polymerisation-lamp) and after this, I repeated the same course of treatment. It is appropriate to do the treatment with rubber dam, especially in the mandibular jaw. The advantage of using the edelweiss body composite is the function, that edelweiss VENEERs, edelweiss OCCLUSIONVDs and edelweiss dentin-body composite have got the same filling level of nano-hybrid particulars (83%) and that is effect of a real monoblock. The result is a reconstruction of the teeth with new vertical dimension with strict compliance to the laws of the nature. That means, that the monoblock has the same natural behaviour like the tooth for example the flexural modulus about 20 GPa. By implication that means, you remove problems of chipping and fracturing ceramics, if you regard the dynamic and static occlusion. If the patient with bruxism would not wear his protect splint over night, then the patient would grind the edelweiss OCCLUSIONVD as if they were the natural teeth, but the result would be no chipping or fracturing.

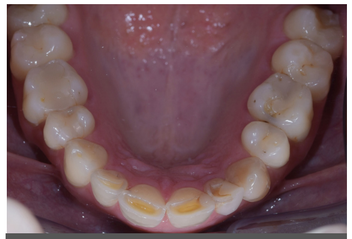
With the edelweiss dentin-body composite I had no problems since I used the flowable composite for cementing the OCCLUSIONVD and VENEERS from edelweiss. The result would be agglutinated interdental spaces with flowable composite and a difficult procedure getting these spaces free from flowable composite.

Clinical Article

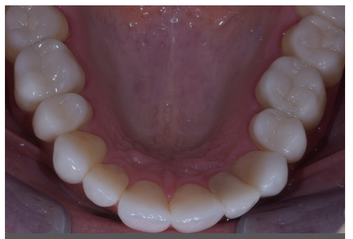


BEFORE

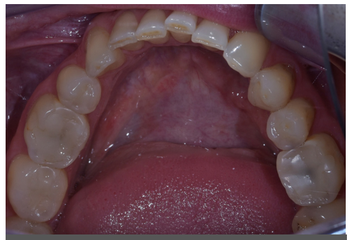
BEFORE



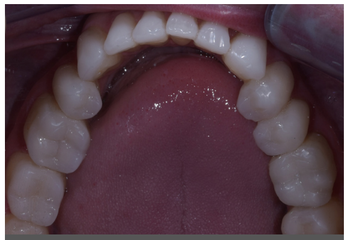
BEFORE



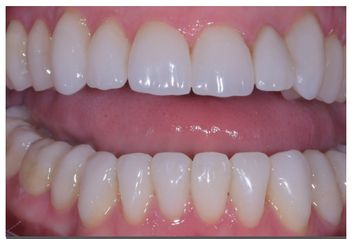
AFTER
edelweiss VENEERs 15-25 edelweiss OCCLUSIONVD 15-18, 25-28



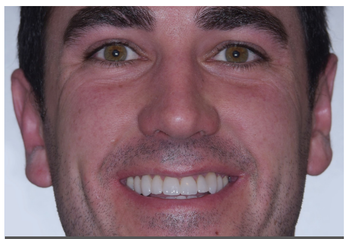
BEFORE



AFTER
edelweiss VENEERs 35 (no 34)-45
edelweiss OCCLUSIONVD 35-38



AFTER



AFTER

After inserting edelweiss VENEERS and edelweiss OCCLUSIONVD

Sometimes the patients have problems with speech after treatment. If so, then I suggest to read e.g. the newspaper out loud and I also advise my patients to use the new teeth like their old natural teeth, because the reconstruction works with the natural tooth as a monoblock. It is advisable for the patients with bruxism to wear an easy bite splint for relaxing the muscles. For me as a dentist, the edelweiss system is a logical solution for patients with bruxism and losing the vertical dimension. The teeth become less sensitive because of not having to prepare natural teeth. The patient is under no pain and this solution is less expensive than ceramic crowns. An important argument for me is that you can always repair the edelweiss reconstructions with edelweiss composites. The edelweiss system is the perfect imitation of the natural aesthetic and function, and I can colour the prefabricated edelweiss VENEERs or OCCLUSIONVDs with the edelweiss composite (A0, A1, A2, A3, A3.5) how I like it for getting my own individualised style and a more natural look. After grinding the edelweiss OCCLUSIONVDs and edelweiss VENEERs you can then polish up the surface, because the edelweiss material is completely laser-sintered. That is why the edelweiss system has got a straight colour fidelity and natural feeling for the patients.

About the Author

Jessica J. Sidharta D.M.D

Working in technic laboratory Ulm, Germany

License in dentistry D.M.D. 2006, University Heidzelberg and Ulm, Germany

Leading the White-Lounge in Munich, Germany

Curriculum in aesthetic dentistry 2014, ZFZ Stuttgart, Germany

Edelweiss user since 2011, lecturing for edelweiss dentistry Wolfurt, Austria