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NON-INVASIVE DENTAL TREATMENT IN AESTHETIC DENTISTRY

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In modern dentistry minimally invasive or non-invasive treatment strategies with adhesive bonding techniques and full ceramic materials, are the best way to achieve an excellent outcome and conserve healthy tooth structure. Meeting our patients' needs regarding form, function and aesthetics to enhance the patients' smile, is often very challenging. So we have to adjust our workflow and choose our materials to meet the treatment goal. Especially for this 18-year-old female patient, we tried to preserve natural tooth structure as much as possible. The central point of this treatment plan is a workflow based on digital photography and a diagnostic mock-up to visualize the result before starting actual treatment. The initial situation shows a diastema between the two maxillary centrals. The laterals were old crowns on peg-shaped teeth. This is a case of non-prep veneers and crowns with refractory technique. I used the Noritake CZR as porcelain, and the corresponding Nori-Vest Zirkonia for the refractory dies.

I would like to give special thanks to dentist Mr Jan Kurtz-Hoffmann (Leipzig, Germany) for providing me with the clinical photos in this case and the outstanding teamwork over the last years.

1 Portrait of the 18-year-old female patient.

INITIAL SITUATION

2 The image shows the initial situation before treatment planning. This case is solved with a minimally invasive treatment.

3 The assessment of the case was done with the help of dental photography to document and considering the aesthetic shortages.

4 The treatment plan includes a digital smile design done by the dentist and a corresponding wax-up. The mock-up with a silicon key is an essential step for a successful outcome.

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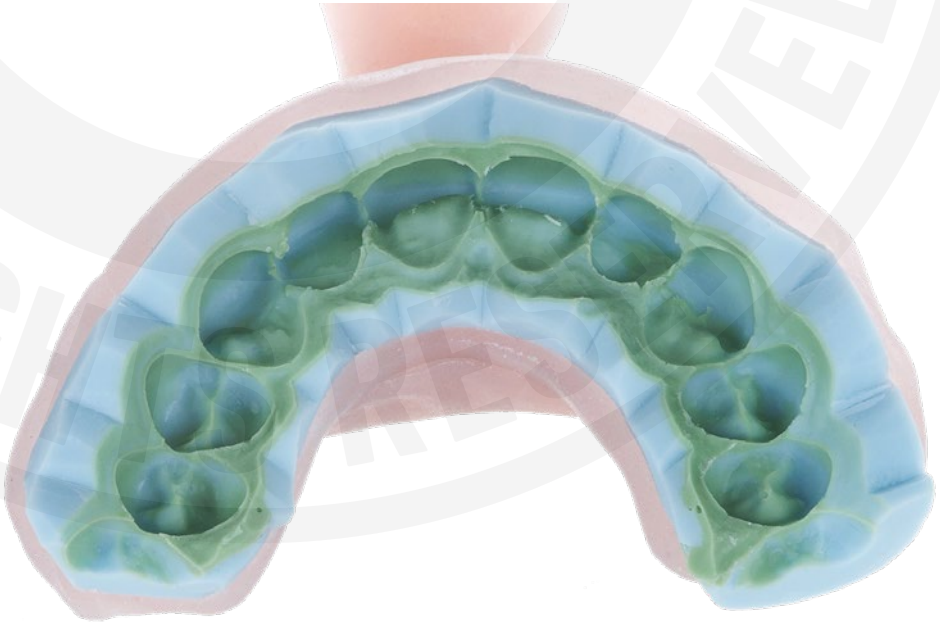
5 The initial situation on the model

6 The corresponding wax-up before making the silicone key



7 The silicone key consists of three layers. A blue putty material and a very thin layer to record fine details. The light curing external layer adds stability to the silicone key.

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MOCK-UP

8 Aesthetics and functional tests with the mock-up, including phonetic test

9 It is important for a good outcome of our restoration to consider the tooth shape under lip dynamics.

10 Result of the mock-up

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11 Model with the refractory dies

12 Wash bake with tx. A very thin layer is important!

13 Starting with a dentin build-up

14 Finalizing the dentin built up with a mixture of dentin and Luster LT 1

15 Adding enamel and luster layer

16 The image shows the finished veneers on a master model.

RESULT AFTER 14 DAYS

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17 The aesthetic outcome after treatment. The image shows the veneers 14 days after the adhesive bonding in the mouth.

18 Veneer close-up

19 Portrait of a happy patient

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TWO-YEAR FOLLOW-UP

20 Situation shows a two-year follow-up

21 Checking lip dynamics

22 Final portrait after two years

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