

Closing spaces with composites

When someone smiles, there are positive and negative aspects of the presentation of the teeth. Positive aspects are e.g. natural brightness, natural translucency, symmetry and a harmonious relationship of teeth and lips.

Negative aspects are e.g. discoloured teeth, broken symmetry and spaces. The latter are quite common, and the dentist plays an important role in the removal of these disturbances which impair a natural and aesthetic smile.

The pictures shown below describe a clinical problem which can be solved quickly and easily with the help of direct composites and a good finishing technique.

The first two pictures show a young woman with a diastema (picture 1) and small spaces in the anterior occlusion (picture 2).

After shade selection (picture 3 and 4) the enamel surfaces were prepared for the application of a self-etching adhesive and the composite by roughening with a fine diamond (picture 5, 6 and 7). To confirm the shade selection, a small volume of composite can be light-cured on the tooth (picture 9).

A special matrix system was used to separate the incisors when closing the diastema (pictures 10, 11 and 12). The matrix supports contouring and the preservation of the gingival papilla. After the placing of the matrix the self-etching adhesive Futurabond NR (VOCO) was applied (pictures 13, 14).

The nano-hybrid composite Grandio (VOCO) was chosen for the restoration. This system has good translucency and ideal resistance against chewing forces. In the first step, material of a higher colour saturation (A2) was applied in the cervical area (picture 15) - A1 was chosen as the main shade. Then the main build-up was carried out with A1 (picture 16). Finally, a translucent area was created with the incisal shade (picture 17), the shade transitions were carefully homogenised with a small brush (picture 18).

After removal of cervical excess with a scalpel and finishing, the polishing was carried out with the Easygloss brush and polishing strips (pictures 19, 20, 21). Picture 22 shows the closed diastema.

The same procedure was then used to enlarge the cervical-incisal dimension of teeth 11, 12, 13, 33, 43 and 44 (picture 23). The final pictures 24 and 25 show the closed diastema and the closed spaces in the anterior occlusion (black circles). The white circle shows a space which could not be fully closed since this would have changed the occlusion. Picture 25 shows how it was possible to establish the excellent harmony of the smile with these minimal corrections. This confirms our conviction that good aesthetics can be reached with minimally-invasive corrections if the material is known and its use mastered. **DA**



Picture 1: Initial situation



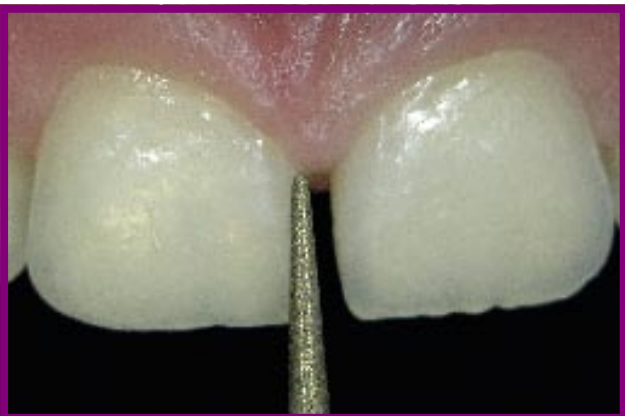
Picture 2: Diastema 11-21 and spaces in the anterior occlusion



Picture 3: Shade selection



Picture 4: Grandio A1 is selected as the main shade for the anteriors



Picture 5: Roughening of the surface with a fine diamond



Picture 6: Roughening of enamel surfaces to increase adhesion. Teeth 11, 12 and 13 will receive composite palatally and incisally to enlarge the cervical-incisal dimension and to close the spaces in the occlusion.



Picture 7: Teeth 32, 43 and 44 are roughened on the surface to increase adhesion, and are to receive composite on the vestibular side.



Picture 8: Last step of shade selection

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Picture 9: Confirming the selected shade through light-curing some composite on a tooth.



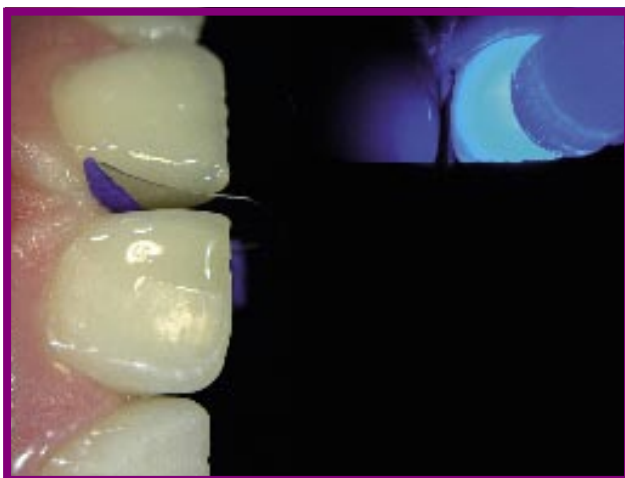
Picture 10: Selection of a special matrix system to close the diastema



Picture 11: Fitting the matrix between 11 and 21



Picture 12: Final adaptation of the matrix.



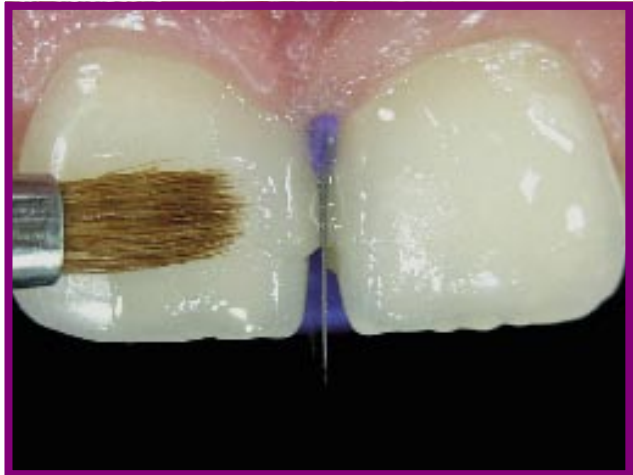
Picture 13: Application of the self-etching bond Futurabond NR (VOCO).



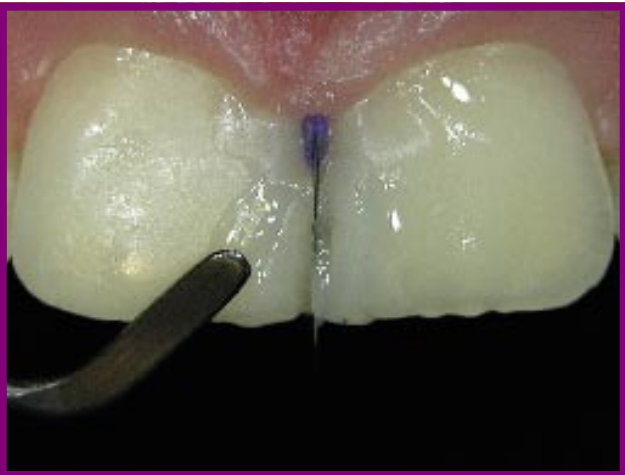
Picture 14: After application of the bond: light-curing



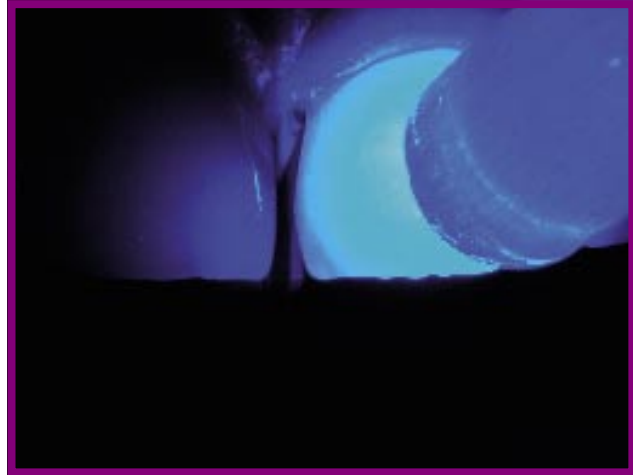
Picture 15: Application of the first layer of the more saturated composite in shade A2



Picture 16: Beginning of the restoration with the basic shade A1.



Picture 17: Applying the final coat of the incisal shade I.



Picture 18: Light-curing the final layer.



Picture 19: Removal of cervical excess with a scalpel.



Picture 20: Approximal polishing.



Picture 21: Polishing with the EasyGloss brush (VOCO).



Picture 22: After closing the diastema



Picture 23: Beginning the enlargement of the cervical-incisal dimension of teeth 11, 12, 14, 33, 43 and 44.



Picture 24: Completed restoration: diastema closed, spaces in the occlusion (black circles) closed, space 22-32 (white circle) not closed for occlusion reasons.



Picture 25: Final view

About the author:

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