

# AESTHETIC ENHANCEMENT OF THE UPPER FRONT

## Preface

Giving patients a beautiful smile back is one of the challenges that every dentist has to deal with from time to time. Although it is often said that beauty is in the eye of the beholder, there are clear guidelines for what is generally accepted as beautiful teeth that lead to a beautiful smile. Here is a case report describing the aesthetic improvement of five front teeth.



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## THE TREATMENT

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During a periodic oral examination, the patient asked if I had any options to give her a more beautiful smile. An aesthetic upgrade of a well-maintained set of teeth with healthy gums with little effort.

She found her teeth, especially in the upper jaw, a bit dark and there were brown lines on them (fig. 1). She did not need white teeth but, now 69, she wanted a beautiful, fresher smile for another 10 years.

Thinking minimally invasively, I suggested a whitening treatment, but she did not like that for compelling reasons. As a second option, I suggested non-prep veneers made of porcelain or composite. After explaining the advantages and disadvantages, the choice quickly fell on composite veneers, where we would work towards the colour of the 'fixed' elements (at the 15 she has an implant with crown and crowns at the 13, 12, 24, 25, 26, 27).

For the realization of aesthetic veneers, I chose **Visalys®** Fill, a Nano-Hybrid filling composite from Kettenbach Dental.

Composite discolours faster than porcelain, but **Visalys®** Fill has a very durable colour stability thanks to minimal water absorption, so it is an excellent choice for this treatment. Furthermore, **Visalys®** Fill does not adhere to the instrument, is easy to modulate and is very suitable for the long term (minimal discolouration & low wear).

To determine the right colour I tested the colour fit with a little sphere of the materials A1 and A2 on top of the tooth and polymerized it. The patient wanted to have a colour between A1 and A2. Therefore I used **Visalys®** Fill A2 for a first layer and **Visalys®** Fill A1 as a second layer on top.

Thanks to the chameleon effect of **Visalys®** Fill & **Visalys®** Flow you get a natural adaptation and harmony.

After anesthetizing and applying a rubber dam, one veneer after the other was designed. I started with the 14 followed by 11, 21, 22 and 23.

The rubber dam is held in place at the 13 by self-adhesive composite (fig. 3).

Every tooth was pretreated by sandblasting with Aquacare, phosphoric acid etching and bonding with Optibond FL prior to free hand modelling of the veneers.

For contouring and finishing, high-quality, diamond-coated instruments from Komet Dental were used<sup>1</sup>. This can also be done with their Q-finisher tungsten carbide milling cutter<sup>2</sup>. The optimum speed for the Q-finisher tungsten carbide cutter is 20,000 RPM with 50 ml/min as water cooling. For further finishing and polishing I used soflex discs, sanding strips, Twisty's and polishing brushes (fig. 9).

For composite materials such as **Visalys®** Fill and **Visalys®** Flow, with an extremely high content of inorganic fillers and therefore very high hardness, a modified method of polishing is necessary. Kettenbach Dental therefore recommends polishing with the so-called 'Twist polishers / KompoLine Polishers from Komet Dental: Pink for pre-polishing<sup>3</sup> and beige for high-gloss polishing<sup>4</sup>. The optimum speed for the KompoLine Polisher is 6,000 RPM with 50 ml/min as water cooling.

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## CONCLUSION

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**Visalys®** Fill & **Visalys®** Flow has excellent mechanical properties and are durable filling composite materials with minimal shrinkage and therefore there is less risk of marginal gaps and secondary caries.

The last picture (fig. 12) shows a natural smile of a happy patient. Affordable aesthetic dental beautification is often possible and an excellent long-term solution.

The composite instruments used (fig. 6-8) are from the Hu-Friedy company.

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Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12

<sup>1</sup> 889.314.009, 8368.314.023, 8862.314.010, 859EF.314.014 | <sup>2</sup> H48LQ.314.012 | <sup>3</sup> 94028M.204.130 | <sup>4</sup> 94028F.204.130

## HAN VAN DE SANDE

Han van de Sande's dental practice in Teteringen, Netherlands, offers general dental care with the focus on prevention and dental preservation. The practice has 4 treatment rooms in which the team of dentist(s), dental prosthetist, (registered) dental hygienists, reception, chair and prevention staff is active.

The team strives for high-quality, innovative and sustainable oral care based on: achieving lifelong dental preservation.

Han van de Sande graduated from Radboud University Nijmegen, Netherlands, in 1992.



**Han van de Sande**