Clinical

Happy patient tells Facebook friends

Dr Thomas Faber describes a case using direct bonded veneers and orthodontics to create an aesthetic smile

A 24-year-old female patient was unhappy about the appearance of her upper anterior teeth, particularly the gaps between them. She also wanted treatment to resolve the crowding of her lower anterior teeth. She thought these issues compromised her appearance and she felt uncomfortable smiling (Figure 1).

The patient's upper lateral incisors were missing from birth and she had undergone orthodontic treatment in the past. The gaps between her central incisors and canines were not completely closed, while all the upper side teeth had been moved mesially.

An orthodontic approach was considered, as well as porcelain veneers and direct bonded composite restorations. The patient dismissed the option of orthodontics to open up gaps for lateral incisors in the upper arch, due to the complexity and duration of the treatment. She also felt the additional cost of replacing the missing teeth with either implant-retained crowns or Maryland bridges was unacceptable.

Direct versus indirect

When discussing the advantages and disadvantages of composite versus porcelain veneers with patients, I point out that composite veneers can last for five to 10 years. With porcelain veneers, more than 10 years can be expected. These timeframes cannot be guaranteed in either case, because of the possibility of mechanical trauma. Potentially, this can affect both types of veneers, in the same way it affects the natural tooth. It can lead to fractures, cracks or abrasions. In this context, I mention that composite veneers can usually be repaired quite easily, but it is more difficult with porcelain veneers.

I also explain that composite veneers are more prone to a build-up of stains on the surface, depending on lifestyle, diet and oral hygiene. This has very occasionally been a problem, most often for heavy smokers, or patients with poor oral hygiene, or a combination of both.

From a dentist's point of view, the treatment option of the direct bonded veneers is economically viable. It takes me about three to four hours for six anterior teeth (varying with the complexity of the case) and generates £1,080 to £1,200 income, with no laboratory fees.

A further consideration is that there will be more patients willing to spend just over £1,000, as opposed to having to spend around £3,000 or more for six porcelain veneers. Hence, offering this option can result in more business for the private dentist.

Treatment planning

A variety of factors will influence treatment planning, including the experience of the dentist. Some cases can be assessed by examining the patient and deciding the right treatment plan on the spot. In more complicated cases, preliminary analysis of photos and study models may be needed. In aesthetic treatments, taking pre- and postoperative photos from three different angles should be looked upon as a prerequisite. Wax-ups or mock-ups may also be required to assess the aesthetic outcome. This will have an impact on the cost of the treatment.

The objective is to create a harmonic arch of teeth in all three dimensions. The central incisors and canines should be approximately equal in length, with the lateral incisors slightly shorter. The incisal edges of the upper front teeth should be in a position that allows the lower lip to attach comfortably when pronouncing the letter 'F'. Both the correct length and the in-out position can be determined this way.

Dr Thomas Faber has extensive postgraduate experience in all areas of dentistry. He regularly receives referrals of complex cases from other dentists in the area. Thomas joined Barnt Green Dental Centre in April 2007, bringing a strong reputation from his native Germany.

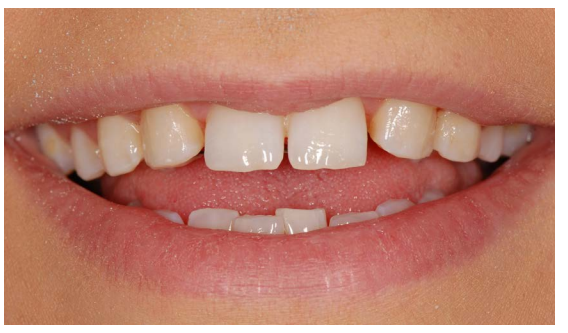

Figure 1: A 24-year-old female patient was unhappy about the appearance of her upper and lower anterior teeth

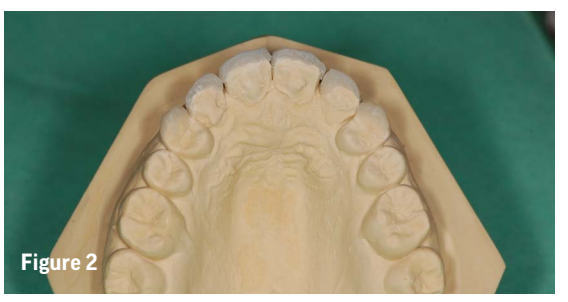

Figure 2

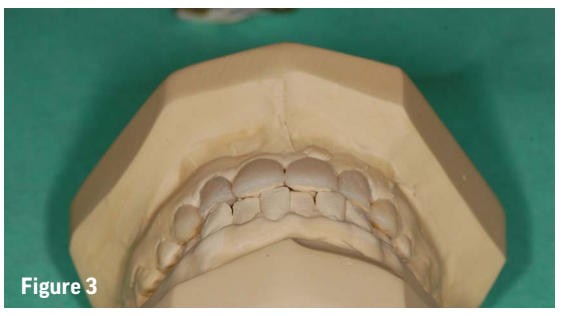

Figure 3

Figures 2 and 3: In this case, I made my own composite mock-ups by building them up on the isolated study model

Further factors to take into account during treatment planning include the patient's profile and the appearance of the patient's lips. Will the patient benefit from creating a slightly wider arch by building up some, or all, of the labial surfaces, or does the patient suffer from incompetent lip closure? Is the bite deep/over-closed or vertically open? The angulation of teeth, rotations, gaps and crossed-over teeth also need to be considered. These will influence whether preparation of some, or all, of the teeth is required, in order to achieve the desired result.

If the treatment involves any tooth preparation or makes tooth cleaning more complicated, then the patient must be made aware and instructed. The aesthetic outcome must be attained without compromising function. Long-term stability can only be achieved if the teeth are all in a functionally correct position. Otherwise a retainer and/or splinting may be required.

Not all cases can be treated adequately with veneers alone. Some may involve preliminary orthodontic treatment. Others may even entail surgery, or a combination of various treatments, for the best possible result. The patient needs to be fully aware of the limitations of treatment using just veneers. For example, some teeth will be thicker or have an unusual shape when treated with veneers alone. All options need to be discussed and informed consent obtained.

In this case, having analysed the patient's smile, I felt that her upper central incisors were too narrow and retroclined, and that her upper lip would benefit from more support from her front teeth. I concluded that using veneers could deliver a satisfactory result, and would keep the treatment simple and affordable. I suggested orthodontic straightening for the lower front teeth. I advised the patient that this was the best solution for her issues.

The patient decided in favour of composite restorations for her upper arch and orthodontics for her lower. Using direct bonded veneers, as opposed to porcelain, kept the total costs just within the available budget.

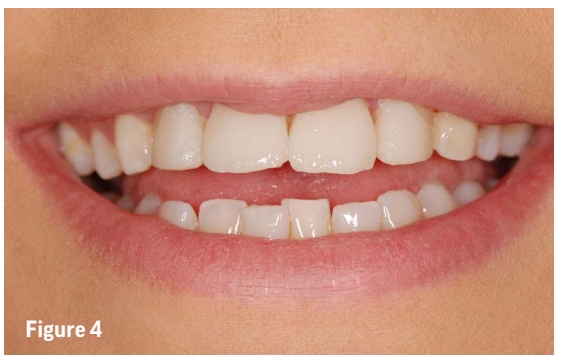

Figure 4

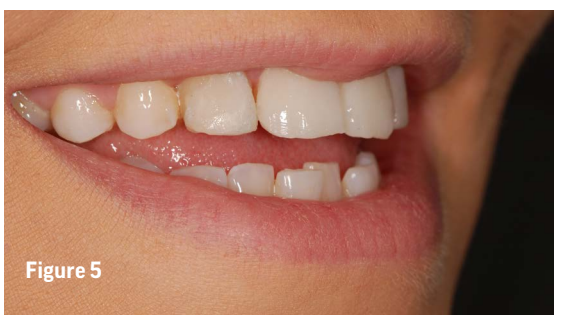

Figure 5

Figures 4 and 5: The mock-up was tried in

Figure 6

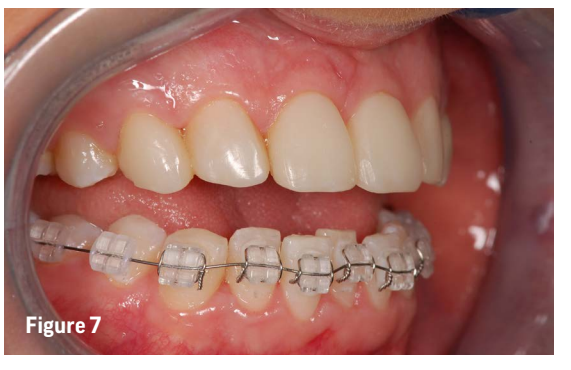

Figure 7

Figure 8

Figures 6-8: The composite veneers were fitted first, followed by a fixed brace using the straight wire technique and Pure Sapphire brackets

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Figure 9

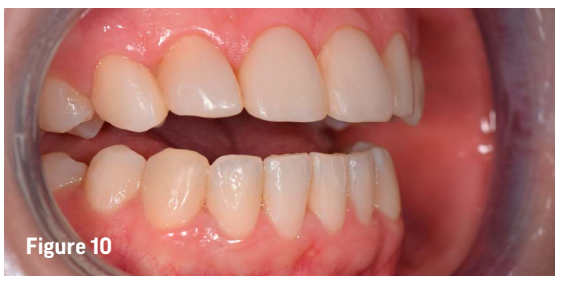

Figure 10

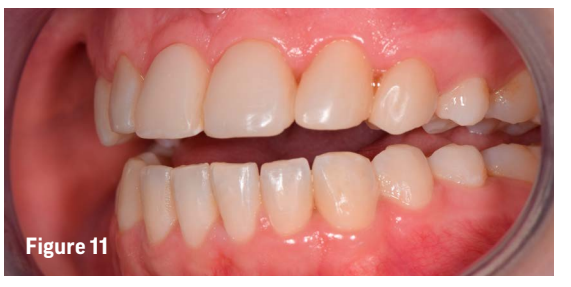

Figure 11

Figures 9-11: I find that restorations with Venus Pearl often create a more natural-looking tooth than porcelain veneers. The veneers had been in situ circa seven months when these photos were taken, with no deterioration of the surfaces or discolouration. No irritation to the gums had occurred

Treatment process

I started by taking impressions with Heraeus Kulzer Xantasil, using the Dynamix speed dispenser. I like to use this material instead of alginate, as the retention to the impression trays is much improved. This eliminates distortion, plus the impressions can be kept for a long period of time. More than one model can be cast from the same impression, without the quality of the cast deteriorating.

For this case, I used study models for the orthodontic treatment planning and the creation of mock-ups. This was achieved by building up rather crude veneers on the unprepared isolated plaster model using composite (Figures 2 and 3). Obviously, this is limited to teeth that do not require preliminary preparation. The mock-up was then tried in (Figures 4 and 5). Both the patient and I were happy with the aesthetic result, so we went ahead with the treatment. The composite veneers were fitted first, followed by a fixed brace using the straight wire technique and Pure Sapphire brackets (Figures 6 to 8).

I love the process of 'creating' a tooth with my own hands and achieving a highly aesthetic result with fairly simple means. I find this kind of dentistry highly satisfying. Combining my personal skills with the right choice of material enables my patients to smile happily. Plus the effect is instant – the result is achieved in only one treatment session.

I use Heraeus Kulzer Venus Pearl composite for this kind of work, because the material comes in a good variety of opacities and shades. These include a broad range of incisal shades, which are applied in thin layers to replicate the natural translucency of the tooth. The material has low shrinkage and, with its excellent surface quality, a durable high gloss finish.

Most of the composites I have used previously contain tiny air bubbles, which appear as porosities on the surface of the finished restoration. These tend to accumulate stains and compromise the aesthetic outcome. This is not the case with Venus Pearl. It has excellent physical and optical properties. I find that restorations with this material often produce a more natural-looking tooth than porcelain veneers (Figures 9 to 11).

Natural appearance

Patients are usually very impressed, even thrilled, with the outcome. They talk about it to their friends and relatives.

Figure 12: This patient was so pleased with the results achieved that she told all her friends on Facebook how happy she was

This patient was so pleased with the results achieved that she posted about her experience on Facebook, saying how happy she was with her new teeth and that she thought her dentist was 'the best in the world' (Figure 12).

Sometimes the patients are a little disappointed that people don't pick up on the changes and they hardly get comments. This just proves how natural their teeth appear, and that their smile, lips and teeth are in harmony. Some would not have been able to afford the treatment with porcelain veneers, so they feel very grateful that this technique is available at a reasonable cost. D