Dr Andrew Wallace explains how he achieved rapid, aesthetic results – to a very important deadline

By Dr. Andrew Wallace, UK

A new female patient came for routine dental treatment. She said that she was unhappy with the appearance of her smile. She had gaps between her upper anterior teeth, which made her self-conscious (Fig. 1 and 2).

She was already aware of the traditional dental treatment options, but did not want fixed orthodontics and declined the offer of a referral to a specialist colleague. She was well-informed of the destructive nature of some restorative procedures and the possible need for elective root canal therapy, if crowns or veneers were chosen.

Planning and preparation

The option of quickly and safely aligning the front teeth was very attractive to the patient. The main alternatives open to her were clear braces or Inman Aligner therapy. The latter was the patient’s first choice. The Inman Aligner can be worn part time, and the treatment is quicker and cheaper.

Orthodontic treatment

Over eight weeks, retraction of the upper anterior teeth was completed using the Inman Aligner (Fig. 3 and 4). The labial bow was used for the first five weeks. The palatal bow was only inserted for the final few weeks to complete the alignment.

Once the teeth were in position, a direct mock-up was done freehand, using composite. This allowed the patient to visualise the incisal edges and proportions of the proposed direct bonding. Following patient approval, a silicone putty matrix was made to guide the final restoration. The composite stage in the treatment process took place one week later.

Flat gingival retraction cord was placed mesial to the central incisors. This small amount of retraction facilitated an optimal emergence profile. A minimally invasive approach was adopted for enamel preparation. A very light bevel (less than 1mm across) was placed on the incisal edges.

The enamel areas to be bonded were sandblasted with aluminium oxide. A non-rinse, self-etching adhesive system was then used. To achieve the space closure, each tooth was built up individually, using a systematic approach. The matrix was employed to aid placement of the midline and incisal edges, and the palatal surface. The shelves of the interproximal areas were outlined with a very thin layer of Venus Diamond A2 composite. The dentine was then replicated and the enamel areas were matched mesially using a putty matrix. A thin layer of Venus Diamond A2 composite was added and covered with PTFE tape. It was manipulated using interproximal carvers and digital pressure, to ensure correct adaptation and blending, then cured through the tape.

Results

A combination of alignment and bonding has given this young lady the smile she didn’t think was possible. It is a non-invasive, fast, predictable and inexpensive alternative to both restorative treatment and orthodontics.

The patient endorsed that the treatment was ideal for her because she was soon to be married. She emphasised that while wearing the aligner, she could talk and go about normal life. She said: The results were even better than I expected and in such a short amount of time. I was able to smile, no longer hiding my teeth, in all my wedding pictures!

Fig 1 and 2: The patient had gaps between her anterior teeth
Fig 3 and 4: Retraction of the upper anterior teeth was completed using the Inman Aligner
Fig 5: Blue opalescence was added to the incisal areas of the central incisors
Fig 6: This was overlaid with Venus Diamond A2
Fig 7: The patient was reviewed two weeks later for final clinical photography and polishing
Fig 8: The patient was able to smile with confidence in her wedding pictures

Make it to the church on time