

New treatment horizons

Marcos White presents a complicated case involving reversal of extraction, short term orthodontics and implant placement as a combined treatment plan.

This female patient presented back in 2012, describing a history of having orthodontic treatment involving extractions. She reported that it had left her bite feeling cramped and her upper jaw profile unsupported. She described experiencing jaw pain and clicking, which she was concerned about.

We explained that we were familiar with both the aesthetic aspect of unsupported facial profiles following extraction and her jaw complaints, and that a consultation would provide the opportunity to offer further advice.

Clinical considerations

The patient subsequently attended for a consultation and enquired as to the possibility of reversing the extractions by opening up the spaces and replacing the teeth with implants. I explained it was theoretically possible, although not a practice that was widely carried out despite there being a growing agreement that premolar extractions have a negative effect on facial support.

I shared with her my observations about her occlusion and apparent bruxing habit, which were two separate aspects of her case, explaining that correcting one would not necessarily improve the other.

Her occlusion had an underlying class III component that had been compounded by the extraction of her upper premolars. This led to her feeling that her lower jaw was squeezed into her upper jaw. This

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Figs 1-5: Pre-treatment in 2012.

Figs 6-10: During Invisalign treatment in May, 2014.

sensation was reinforced by certain clinical signs and symptoms, including a deviation to the right on opening, which was suggestive that her jaw had to manoeuvre into

the correct position on closing. There was also an associated click in the right hand side jaw joint. Her teeth met together in different and asymmetric ways on either side, and she had a great number ➔

of recessions and abfractions that were indicative of a clenching or grinding habit. In addition, she had incisal wear facets, as well as hypertrophy in the masseter muscles that were concurrent with a clenching and grinding habit.

We explained that there is considerable overlap in dentistry between occlusion, clenching, grinding and jaw problems. However, it has never been proven that one is caused by the other; neither would it be wise to embark on addressing one solely to cure the other.

We stated that she needed to be aware that whilst we would attempt to create a better occlusion in terms of a more textbook bite (that also happens to deliver improved aesthetics in terms of facial support), we were not promising any improvement in the clenching, grinding or jaw clicking.

That said, we went on to indicate that we would certainly be

attempting to deliver an occlusion that adhered to the fundamental laws of occlusion (class I molar relation, anterior disclusion, canine guidance), which her bite, at that time, did not.



Figs 11-14: Implant placement in 2014.



Figs 15- 21: Following completion of treatment, November, 2015.

We explained that this was a very complex case and that while we had successfully tackled all of her treatment goals in individual cases, we had never attempted them as a combined treatment plan.

Treatment plan

We agreed a treatment plan comprising two parts, which involved using Invisalign orthodontic aligners to open up the extraction spaces to allow for the insertion of two implants to replace the teeth lost at extraction.

We fitted her Invisalign aligners in November, 2012, and by June, 2014, enough space had been created in order to place two 3.0mm x 10.5mm BioHorizons tapered internal implants at sites 15 and 25.

During the implant integration phase the patient was able to continue with her Invisalign treatment, so that every aspect of the plan remained on course. In November, 2015, following completion of the orthodontic phase, the patient's previously extracted premolars were successfully restored with two screw retained e.max implant crowns. These were designed and fabricated in house using the latest in digital dental technology. This completed the patient's transformation and she was subsequently discharged from the care of The Courtyard team. She is now back in the safe hands of her general dentist, who makes regular referrals to The Courtyard.

Final thoughts

Twenty first century dentistry offers exciting opportunities for both the dental team and patients, and this case was no exception, highlighting the need for experience and expertise in a number of newer techniques.

It is cases such as this that really bring home the truth that dentistry is always evolving and that, to provide patients with best practice, so must we as dental professionals.