Certifikační kurz Invisalign

Dr. Andrea Bazzucchi, DDS, MS

Kdy: 14. 10. 2015, 9:00-18:00
Kde: Hotel Nové Adalbertinum, Hradec Králové
Rozsah Kurzu: 12 měsíční kurz skladající se ze 3 částí TC1, TC2, MC
Navazující části: TC2 15.1.2016, MC 10.6.2015
TC1 Training course 1: základy Systému Invisalign, příprava Clinchecku, Tracking
TC2 Training course 2: AP korekce, Invisalign Teen, pokročilé techniky monitoringu léčby + finishing
MC Master class: pokročilé techniky, komplexní případy
Cena: 1500 euro +DPH
Registrace: online na www.invisalign.cz nebo na www.invisalign.sk
Další případné dotazy: Radim Mikeš
CASE REPORT

Severe Anterior Crossbite Treatment with Invisalign

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Dr. Andrea Bazzucchi received his Doctorate of Dental Surgery from Università Cattolica del Sacro Cuore, Rome in 1992. In 1996 he received his Master of Science in Dentistry in Orthodontics at Case Western Reserve University, Cleveland, Ohio, and in 1999 received his second master in Orthodontics from the University of Naples, Facoltà di medicina e Chirurgia I Policlinico. Dr. Bazzucchi is an international Speaker on Invisalign technique at Case Western Reserve University, Cleveland, Ohio. (USA), he is also instructor at the University of Ferrara on the Invisalign Masters course.

Dr Antonello F. Pavone graduated with honors in 1995 at the University of Tor Vergata, Rome. In 2000 he obtained his LMD from the University of Geneva. Subsequently collaborated with Prof Belser and Prof Wiskott as research assistant in the Fixed Prosthodontics Department and with Prof. Pascal Magne as clinical operator in esthetic dentistry. Was employed as a contracted professor at the University of Aquila from 2001 to 2003. Dr. Pavone is author of scientific articles and both national and international presentations, and in his private practice is purely dedicated to prosthodontics and restorative dentistry.
Introduction

A 25-year-old male patient came to the clinic with a specific request: “I want to straighten my teeth without braces”. He presented a severe crowding of the upper and lower arches with transverse dental constriction and had an anterior and posterior crossbite.

During the consultation the indication for upper and lower first premolar extraction was quite clear, due to the fact that without extraction to create enough space to solve the incisors crowding would have flare them out too much. Then I deeply look at this case and I asked to myself “How much space would I gain with the arch development, and if I combine that space with some interproximal enamel reduction still the incisors will be flare out, and more important, how much?”

In my opinion today the correct use of the ClinCheck software is one of the most precise, if not the most, that can help us to visualize and give us all the clinical information that like on this case are fundamental to create the treatment plan.

ClinCheck software help us by visualizing the final goal, it give us the opportunity to measure the amount of dental movements but also maybe even more important allowed us to be very selective and specific tooth by tooth in the amount of dental movements and also in the sequence. That is why in case like this and also in other clinical situations such us periodontal compromise patient, adult, pre-restorative, implant space preparation, presence of gingival recession and other; Invisalign is my first if not the only choice.

The present article shows that Invisalign can be used for the correction of severe crossbite.
Diagnosis

Clinical examination and X-Ray-analysis (Fig. 1,2) showed an anterior crossbite of 1.2 and 2.2, Class I molar and canine relationship on the right and left sides. He also had narrow arches with a posterior crossbite on 2.6. Furthermore, the patient had severe crowding in both arches, particularly in the incisal area, and a constriction of both arches. The patient also had an open bite tendency and upper midline deviation to the left. The examination revealed some decay, so the patient was referred to the dentist for treatment first.

Treatment Goals

• Obtaining class I canine and molar on both sides
• Correction of the anterior and posterior crossbite
• Obtaining functional overjet and overbite
• Achieving coincident dental midlines
• Alignment and coordination of both arches

Treatment Plan

After seeing ClinCheck plan we were able to visualize and set up a treatment without extraction, proclining and protracting the upper central incisors between 1.5 and 2 mm. The treatment plan (Fig. 3) consisted of alignment of both arches with 2mm expansion at the premolar area and 1.5 mm at the first molar area on each side, upper and lower.

Concerning the upper laterals incisors two points should be stressed. First, the short clinical crown of this tooth does not offer the best grip for the aligners, so every time that we plan de-rotation or vestibular movements an attachment should be placed to improve the grip.
Another advantage of the Invisalign technique is the precise predictability of the desired movements.

With fixed appliance we cannot be so specific on the quantity, timing of dental movements and also on the amount of IPR, also with Invisalign we can avoid a lot of round tripping of the teeth.

So in this specific case, like in many other clinical conditions such as periodontal patients or even in cases with root resorption, Invisalign is my first choice if not the only choice.

The initial ClinCheck treatment plan had 29 aligners for the upper arch and 33 for the lower arch.

Treatment outcome

The final pictures before refinement (Fig. 4) show that the upper and lower arches were developed very satisfactorily. Moreover, an almost ideal alignment of the upper and lower incisors was achieved.

The crossbite of the teeth 1.2, 2.2 and 2.6 was solved. Only on tooth 2.6 an unwanted intrusion occurred, due to tight interproximal contacts. From the final panoramic x-ray (Fig. 5) it is possible to see the roots' parallelism. The final lateral x-ray and tracing (Fig. 6) shows how adequately the upper and lower incisors were controlled in the anterior posterior plane. The movement of the upper left lateral was remarkable, around 7 mm with no visible bone reabsorption or soft tissue scarring. The lower canines were rotated significantly with the use of optimized rotation attachments and left one was also significantly up righted.
At the end of the first set of aligners a refinement was required only to solve the intrusion of 2.6 and finalize lower anterior alignment. The refinement had 6 upper and lower aligners and after completion of the second set of aligners all treatment goals were successfully accomplished as shown on the final pictures (Fig. 7).

Conclusions

With the latest improvements on the Invisalign technique, treating this type of complex malocclusions is now more predictable than ever. The aligners not only offer excellent treatment outcomes but have also become the treatment of choice for certain types of cases.

Invisalign Smart Force features such as optimized attachments allow the correction of difficult tooth rotations, extrusions, root tipping and space closure; making it possible to achieve excellent finishing results in difficult treatments.

As the patient in this case study was unwilling to wear visible braces, Invisalign treatment was proposed to him.

The precision of the ClinCheck software allows important decisions during the treatment plan phase and better visualization of the different results we could get if we choose either treatment plan option.
References


5. Hahn W et al.: Torquing a maxillary central incisor with aligners, AJODO July 2011 vol 140 issue 1


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