

**Due to technical difficulties there were some audio problems with the webinar recording. Starting at 27:54, please use this guide to follow along with Dr. Kercelli's presentation.**

Keeping all these knowledge in mind I will show you 3 cases treated with the Forsus appliance.

She is a Class I adult patient presenting with a deep anterior overbite.

Her intraoral photos. With application of lingual appliances, we know that the bite will open immediately and the mandible will rotate posteriorly so the posterior relation will not be Class I any more with this effect. So I included Forsus Appliance to the treatment plan from the beginning.

And also I really didn't want to use Class II elastics in this particular case. Because I didn't want to extrude the upper incisors which can be seen with Class II elastics.

The upper and the lower jaw.

The day of bonding.

Now you see what I meant in the beginning; there is no more Class I relationship in the posterior segment.

It was before the new Forsus attachment had been launched so I made an attachment by myself on the chair-side, which is more time consuming than bonding the new prefabricated customized attachment.

After 5 months of Forsus usage, appliance had been disengaged.

And up and down elastics are used for refining the occlusion. Elastic with a Class II component was preferred for the left side.

I still have 16x24 SS with ET archwire on the upper arch.

But in the lower I preferred to use a lighter archwire for allowing teeth to erupt into the occlusion by the force generated from the elastics.

And the final photos.

The treatment goal has been achieved. Deep overbite has been corrected by preserving the initial Class I molar relationship. Treatment took approximately 2 years.

The upper and the lower arch. Bonded retainers are on.

And the change of the smile esthetics.

Secondly, again I will present an adult case but this time with upper bicuspid extraction. She is a High Angle Class II patient.

You see the intraoral photos. She has a Class II molar and canine relationship. Her lower left first molar had been extracted long time ago and the second molar severely tipped mesially to the extraction site.

Her upper left lateral is peg-shaped and she has v-shaped recessions on the upper first bicusipds and first molars.

She has a well aligned lower arch with an interesting omega shaped upper arch.

Frontal and profile.

Smiling photos.

Rest and smiling from the profile.

She is a Class II retrognathic highangle case with an increased lower facial height.

My treatment plan was:

- Upper bicuspid extraction
- Level & align both arches
- Maintain the anteroposterior position of the upper incisors
- Correct the upper incisor torque
- Improve the dentoalveolar relationship by using Forsus appliance

The upper first bicuspid were extracted to gain a space for resolving the anterior crowding and correcting the upper midline. And also for achieving a Class I canine relationship.

By the way, her upper midline had been shifted to the left side according to the face.

Teeth were extracted and composite pontics were bonded for esthetics.

At the third appointment (07.12.2012).

You see a partial canine retraction for opening a space for upper left lateral on .016 round NiTi.

Uprighting of number 37 by using a cantilever attached on a miniscrew.

From the center and buccal sides.

17x25 TMA wire with a 45 degrees of uprighting bend was used.

Next appointment, with open coil on a rectangular wire.

And then after opening enough space, number upper left lateral was engaged to a round wire.

Approx. 12 months later en-masse retraction had started. And double cable mechanics were used. Which means elastics for retraction is attached both from the buccal and the palatal side. Also you can see here, lower left second molar was almost uprighted completely.

From the center and buccal sides.

In 13 months it is uprighted completely.

At the upper photo you see the initial tipping, and in the lower photo you see the uprighting.

Extraction spaces in upper arch are almost closed.

And in the lower arch number 37 is now included on the archwire.

Stainless steel sleeve is used to protect archwire from the occlusal damages and also for the comfort of the patient.

Next appointment, only little space left on the left side.

This is the day that the Forsus appliance was engaged. It was engaged after the maxillary en-masse retraction had finished.

In this particular case, I didn't want to increase the posterior anchorage by using the Forsus appliance during the en-masse retraction; because, I didn't want to retract the upper incisors heavily. We all know that upper lip support is very important for achieving an esthetic result at the end.

5 months later Class I canine relation was achieved on both sides.

During the Forsus treatment securing button on the left, had been debonded and I had secured the Forsus attachment to the lower archwire by an esthetic ligature wire.

Personally I don't see a reason to use an extra securing button. The bonding surface of the golden attachment is large enough to withstand the forces coming from the Forsus spring, which will not exceed 200 grs per side if you use it according to the manufacturer's recommendations. Up to date, I have bonded approximately a dozen of new Forsus attachments and haven't seen a bonding failure so far. They are pretty reliable.

Forsus had been disengaged.

Fine tuning for the occlusion with up and down elastics.

Sometimes it is hard for the patients to use the lingual brackets for attaching elastics so you can use minimold to make a composite button.

Upper & Lower 18,2x18,2 TMA wire for final details ligated with power ties in order to get the maximum individual torque and angulation values according to the preprogrammed set-up.

Now the patient is in this stage intraorally.

You see the effective leveling & aligning in both arches and the lower second molar that is uprighted very effectively.

Pre-treatment cephalometrics.

Final cephalometrics.

You see a very effective torque control on the upper incisors. It is significantly improved. Mandible is relocated anteriorly. I assume that the mandible was functionally retruded because of the upper incisor inclination and when it is corrected, with the help of the Forsus Appliance it is relocated more anteriorly.

But of course this is just an assumption.

You see the superimpositions.

Actually, I find handmade arbitrary comparisons more useful for myself. I will share it with you.

These cephalograms are both taken in the same machine in my office. So the magnifications are exactly the same.

And I translate them to the PowerPoint slide with the same size and proportions. I use palatal plane as a reference line. So I draw line on the palatal plane and I copied this line and drag it on the second cephalometrics and oriented the second cephalometrics according to this reference line.

And now I can compare the two radiographs visually.

By doing this I can see the big picture more easily.

In this patient I have achieved my goals very effectively.

- Improve of the upper incisor torque.
- Maintain the antero-posterior position of the upper incisor.

And I didn't retract the upper lip. Honestly, I wasn't expecting a mandibular relocation but it really helped for the improvement of the profile.

Now I will show you the profile change on the photos.

Even though upper bicuspid were extracted, the position and the inclination of the upper incisors have been improved.

This is definitely because of the superior torque control capability of the Incognito Braces.

In this patient a tremendous change was achieved for the profile with the combination of Incognito and Forsus Appliances.

Frontal smile.

Three quarters of the smile.

Her smile has changed dramatically.

She is enormously satisfied with the result.

My last patient is a Class II Nonextraction, growing case.

He is 14 yrs old.

Smiling photos.

Intraorals.

Class II on the right side, Class I on the left side.

Upper and the lower jaw with minor crowding.

He is at the postpeak pubertal stage according to CVM index.

Panorex.

Treatment plan was:

- Level & align both arches
- Correct the Class II malocclusion with Forsus Appliance

At the time of initial bonding.

Immediately, Class I molar relationship on the left side turned to Class II after the initial bonding of the appliances. This effect is very common with lingual appliances.

So when ordering the Forsus Appliances please consider this effect. Because at first, you may think that unilateral Forsus could solve the problem. But here you see Forsus is needed bilaterally.

Next appointment 16x22 in the upper and still 016 round wire in the lower

Leveling and aligning takes place

Now in the upper 18x25 niti ligated with powertie and in the lower 16x24 SS wire is in place.

And in the next appointment Forsus is engaged. In the upper you see the 16x24 SS with Extra torque and in the lower 16 x24 SS.

Both archwires were ligated with steel overties. In the upper you see o-rings placed on the steel overties for comfort reasons.

Buccal views just before the engagement.

You see the Forsus Appliance in place.

3 months after the Forsus Appliance engagement

You see the upper and the lower jaw.

I recommend figure-8 ligatures from 6 to 6 in both arches to prevent unwanted spacings between the teeth.

4 months after.

Upper and the lower arch.

5 months after you see again I lost the safety buttons. In this case; Forsus attachments secured the buttons from swallowing.

Upper and lower arches.

I placed powerchains to control the spacings.

6 months later I disengaged the Forsus Device.

Upper and the lower arc.

From the buccal views.

18,2x18,2 TMA wire ligated with power ties for achieving the finishing details. I have grinded down the molar bands for fine settling of the occlusion.

He is currently in this stage.

Comparison of the profile. His profile is improved nicely. Deep labiomental sulcus at the beginning turned to a normal curved sulcus.

Profile smiling.

Panorex.

You see the mesial movement of the mandibular dentition.

The Superimpositions. No change in the total mandibular length. Just dentoalveolar modifications have happened.

My way of comparing the cephalograms.

Interincisal angle is decreased.

The smiling esthetics

Finally I want to conclude that Forsus FRD and Incognito Lingual Appliance System combination may offer very good results in Class II patients.