Upper Arch Alignment with the ClearSmile Inman Aligner

By Inman Aligner

Treatment planning

In this case, the patient contacted the clinic because she was both unhappy with her upper anterior teeth and worried about the increasing crowding. At this time, she did not feel that crowding in the lower arch was a problem. She made it clear she was not motivated for fixed orthodontics and was interested to know if her upper anterior teeth could be aligned with the ClearSmile Inman Aligner. After an orthodontic assessment, UR2 was identified as the landmark tooth, and the Spacewize™ crowding calculator showed that the difference between the available space and required space was 2 mm.

When the case was submitted to the IAS Academy’s online support along with clinical photographs and Spacewire™ analysis, the trainers confirmed that it was a suitable case for the ClearSmile Inman Aligner with a combined expander, and would help to unlock the overlapping central incisors. The trainer also said that it may not be possible to completely align the upper arch while the lower arch remained crowded, so a digital setup was requested from the laboratory to ascertain exactly what could be achieved.

Using the digital setup, I was able to discuss the final outcome with the patient, as well as explain the composite bonding process that would take place at the end. The treatment goal was to achieve straighter, more natural-looking teeth and restore incisal wear in UR1 and UL1 while preserving the enamel. Information about the bonded retainer was also given at this time and the importance of retention. After she consented to the treatment plan, impressions were taken and the appliance was ordered from the laboratory.

Appointment

At the initial appointment, palatal anchors were placed, with interproximal reduction (IPR) and predictive proximal reduction (PPR) carried out using the guide issued from the laboratory. The patient was instructed on how to turn the expander, Aligner in situ. UR1 anchor removed, and IPR and PPR carried out using discs for canines and blue/red strips for anterior teeth. Progress with crowding on target at this point thanks to use of expander. IPR strips used and space between UR1 and UL1 polished. Patient had turned the expander eight times by this point – instructed to stop PPR carried out on the central incisors, with space between UR1 and UL1 polished again. Discs used distally on the canines, with a composite anchor placed on UR1 and composite anchor removed from UL1. Impressions were taken for ClearSmile Aligners.

First ClearSmile Aligner fitted. Second ClearSmile Aligner fitted and worn for two weeks solid before being used at night to aid retention. At this point there was a break in treatment, as the patient was breastfeeding her baby. After a couple of months, treatment recommenced with bleaching and impressions were taken for a retainer.

Fixed retainer bonded followed by composite bonding of UR1 and UL1 using the reversed triangle technique. The benefits of this technique include:

- Affordable
- Ethical (preserves tooth structure)
- Aesthetic
- Simple
- Complements alignment therapy.

Afterwards, the restoration was polished with both first disks and Mini Flexifluid with Exantrim polishing paste. At the end of this appointment, new impressions were taken for new bleaching trays and an Essix retainer. Composite re-polished and patient given bleaching tray and retainer to wear at night.

Self-appraisal

The patient was very satisfied with the results, especially the fact I was able to improve her smile without affecting the integrity of the enamel. I sent before and after images to the patient at the end of her treatment pathway so that she could see the difference, and she was amazed at how much the aesthetics of her teeth had changed. I was also very happy with the outcome – with the help of the IAS Academy and digital planning tools, treatment was safe and predictable.

Table 1 – Assessment / Diagnosis

<table>
<thead>
<tr>
<th>Skeletal</th>
<th>Class I</th>
<th>Average</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMA</td>
<td>No</td>
<td>Normal</td>
<td>NL angle</td>
</tr>
<tr>
<td>Lower face height</td>
<td>No</td>
<td>Class I</td>
<td>crowded</td>
</tr>
<tr>
<td>No</td>
<td>4mm (at UR1)</td>
<td>30 per cent overlap of incisors</td>
<td></td>
</tr>
<tr>
<td>Soft tissue</td>
<td>No</td>
<td>Class I</td>
<td>Class I</td>
</tr>
<tr>
<td>Incisor relationship</td>
<td>No</td>
<td>All present</td>
<td>2mm deviated to the right in upper</td>
</tr>
</tbody>
</table>

Table 2 – Treatment pathway

1. At the initial appointment, palatal anchors were placed, with interproximal reduction (IPR) and predictive proximal reduction (PPR) carried out using the guide issued from the laboratory. The patient was instructed on how to turn the expander, Aligner in situ.
2. UR1 anchor removed, and IPR and PPR carried out using discs for canines and blue/red strips for anterior teeth.
3. Progress with crowding on target at this point thanks to use of expander. IPR strips used and space between UR1 and UL1 polished.
4. Patient had turned the expander eight times by this point – instructed to stop PPR carried out on the central incisors, with space between UR1 and UL1 polished again. Discs used distally on the canines, with a composite anchor placed on UR1 and composite anchor removed from UL1.
5. Impressions were taken for ClearSmile Aligners.
6. First ClearSmile Aligner fitted.
7. Second ClearSmile Aligner fitted and worn for two weeks solid before being used at night to aid retention. At this point there was a break in treatment, as the patient was breastfeeding her baby.
8. After a couple of months, treatment recommenced with bleaching and impressions were taken for a retainer.
9. Fixed retainer bonded followed by composite bonding of UR1 and UL1 using the reversed triangle technique. The benefits of this technique include:
   - Affordable
   - Ethical (preserves tooth structure)
   - Aesthetic
   - Simple
   - Complements alignment therapy.
10. Afterwards, the restoration was polished with both first disks and Mini Flexifluid with Exantrim polishing paste. At the end of this appointment, new impressions were taken for new bleaching trays and an Essix retainer. Composite re-polished and patient given bleaching tray and retainer to wear at night.
MAINTAIN IMPLANTS
WITH GUIDED BIOFILM THERAPY

SAFE AND COMFORTABLE BIOFILM REMOVAL

PERI IMPLANTITIS IS EASILY TREATABLE

POWER SCALING CAUSES NO ALTERATIONS TO THE IMPLANT SURFACE

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The ClearSmile Inman Aligner course is part of the IAS Academy pathway of training for GDPs. The course is a continuum and two cases must be submitted and evaluated on completion for website listing.