

Asymmetrical Extraction Mechanism to Treat Class III Malocclusion with Anterior Crossbite and Midline Deviation

Abstract

Introduction: A 19yr-10mo-old male presented with a chief complaint of poor dental esthetics.

Diagnosis: Cephalometric analysis revealed a skeletal Class III relationship (SNA 85°, SNB 87°, ANB -2°), as well as reduced facial convexity (-10°) and proclined upper incisors. An intraoral assessment revealed bilateral Class III malocclusion with anterior crossbite (UR1, UL2, and UL3), and the midline was deviated 3mm to the left. Mild crowding appeared in the lower anterior dentition, and a gummy smile was apparent when the patient smiled. The Discrepancy Index (DI) was 27.

Treatment: A Damon® system appliance with passive self-ligating brackets was applied to correct the dental malocclusion after extracting four premolars (UR5, UL5, LR4, and LL5). Asymmetric extraction was carried out due to midline deviation. Posterior bite turbos and early light short Class III elastics were used to correct the anterior crossbite. Space closing and midline correction were also accomplished with elastics. The active treatment was 20 months. Gingivectomy and frenectomy were then performed afterwards to correct soft tissue contour.

Results: Improved dentofacial esthetics and occlusal function were achieved after treatment. The Cast-Radiograph Evaluation (CRE) was 10, and the Pink and White esthetic score was 3. Neither significant root resorption nor periodontal problems were noted. There were two discrepancies: non-parallel root axis of UL6 and UL7, as well as less-than-ideal interproximal contact between LL4 and LL6.

Conclusions: This case report demonstrates the use of passive self-ligating appliances to resolve skeletal and dental Class III malocclusion without the intervention of orthognathic surgery. (J Digital Orthod 2021;64:26-42)

Key words:

Skeletal Class III, full-cusp Class III, anterior crossbite, midline deviation, passive self-ligating brackets, asymmetrical mechanics, gingivectomy, frenectomy

Introduction

The dental nomenclature for this case report is a modified Palmer notation with four quadrants: upper right (UR), upper left (UL), lower right (LR), and lower left (LL). Teeth are numbered 1-8 from the midline in each quadrant.

Class III patients are often challenging for clinicians since a correct diagnosis with proper treatment timings and methods can be further complicated when it is related to skeletal problems. Camouflage

treatment and orthognathic surgery are two dominant treatment options for this type of patient. It is still being debated which treatment is a better option.¹ Orthognathic surgery was once the only treatment approach for correcting skeletal Class III. However, the high risk of surgical complications and massive financial expenses put off patients from accepting the treatment. Therefore, camouflage treatment was introduced to proceed with the correction.² The technique of camouflage treatment involves extraction to compensate for the skeletal discrepancy. Studies show an increase in the ANB

Vicky T. Huang,

Clerk, Beethoven Orthodontic Center (Left)

Bear C. Chen,

Association Director, Beethoven Orthodontic Center (Center left)

Chris H. Chang,

Founder, Beethoven Orthodontic Center

Publisher, Journal of Digital Orthodontics (Center right)

W. Eugene Roberts,

Editor-in-Chief, Journal of Digital Orthodontics (Right)



angle, slight or no modification in the vertical dimension, and decreased concavity of the facial profile after Class III camouflage treatments.³⁻⁹ This case report demonstrates a non-surgical treatment of a slight Class III jaw relationship with Class III molar relationship. With a thorough stepwise diagnosis and Chang's extraction decision table (*Table 3*), this challenging case was completed with a satisfying result.



■ Fig. 1: Pre-treatment facial and intraoral photographs in centric occlusion (C_0)

Diagnosis and Etiology

A 19-year-old male presented for orthodontic evaluation for misaligned teeth and a protrusive chin (Fig. 1). A radiographic examination was performed with a panoramic radiograph, lateral cephalometric film, and a temporomandibular joint (TMJ) series (Figs. 3-5). Cephalometric analysis revealed a long face and protrusive maxilla and mandible (Table 1). The analysis also indicated a skeletal Class III accompanied with normal maxilla and protrusive mandible (Table 1). No contributing medical history was reported but there was a large chip off the distal-incisal edge of the UR1 due to dental trauma during

childhood. The anterior crossbite may be related to the overgrowth of the mandible.

As for facial evaluation, a concave profile, retrusive upper lip to the E-line, and a relatively protrusive lower lip were noted. A gummy smile tendency was also noticed. The panoramic radiograph



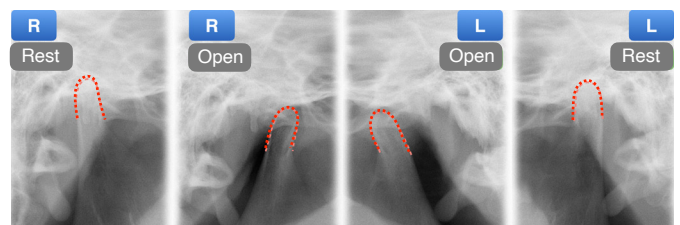
■ Fig. 2: A close-up shot of the anterior crossbite



■ Fig. 4: Pre-treatment cephalometric radiograph



■ Fig. 3: Pre-treatment panoramic radiograph



■ Fig. 5 :

Pre-treatment TMJ transcranial radiographs show the right (R) and left (L) sides in the rest and open positions. The mandibular condyles are outlined in red. Note the asymmetric mandibular condyle heads are longer on the right compared to the left side.

revealed missing L8s bilaterally and a past root canal treatment on UR1. The intraoral examination showed a diastema between the upper anterior teeth and anterior crossbite of the UR1, UL2, and UL3. The maxillary dental midline was coincident with the facial midline, and mandibular dental midline shifted 3mm to the left. The pre-treatment cephalometric analysis confirmed a skeletal Class III tendency ($ANB=-2^\circ$) as previously mentioned (Fig. 4; Table 1). The TMJ radiographs (Fig. 6) showed asymmetric condylar morphology, but there were no signs or symptoms of temporomandibular dysfunction (TMD). The American Board of Orthodontics (ABO) Discrepancy Index (DI) was 27

points,⁵ as shown in Worksheet 1 at the end of this report.¹⁰

Treatment Objectives

1. Correct the anterior crossbite to an ideal overbite and overjet.
2. Achieve Class I canine and molar relationships.
3. Correct the midline discrepancy.

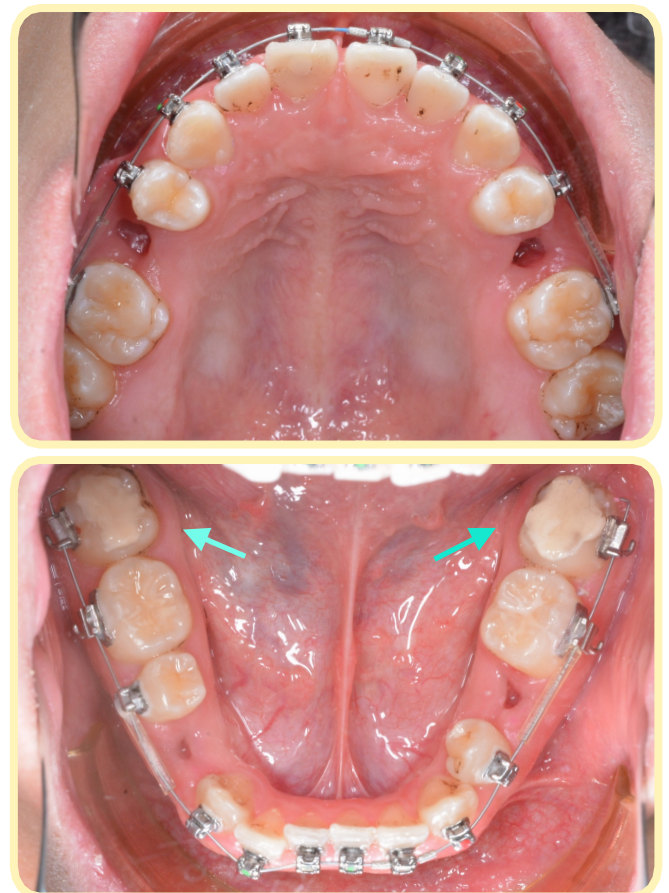


Fig. 6: Premolars were extracted in the initial treatment. Posterior bite turbos were bonded on the lower arch for bite opening (blue arrows).

| CEPHALOMETRIC SUMMARY | | | |
|--------------------------|--------|---------|-------|
| SKELETAL ANALYSIS | | | |
| | PRE-TX | POST-TX | DIFF. |
| SNA° (82°) | 85° | 85° | 0° |
| SNB° (80°) | 87° | 85° | 2° |
| ANB° (2°) | -2° | 0° | 2° |
| SN-MP° (32°) | 28.5° | 28° | 0.5° |
| FMA° (25°) | 21.5° | 21° | 0.5° |
| DENTAL ANALYSIS | | | |
| U1 TO NA mm (4mm) | 7 | 4.5 | 2.5 |
| U1 TO SN° (104°) | 122.5° | 113.5° | 9° |
| L1 TO NB mm (4mm) | 5 | -1.5 | 6.5 |
| L1 TO MP° (90°) | 87° | 67.5° | 19.5° |
| FACIAL ANALYSIS | | | |
| E-LINE UL (-1mm) | -3 | -5 | 2 |
| E-LINE LL (0mm) | -2 | -2 | 0 |
| %FH: Na-ANS-Gn (53%) | 56% | 55% | 1% |
| Convexity:G-Sn-Pg' (13°) | -10° | -9° | 1° |

Table 1: Cephalometric summary

Treatment Plan

The plan for this camouflage treatment was to resolve the Class III relationship by retracting the lower arch and correcting the anterior crossbite. Extraction of the UR5, UL5, LR4, and LL5 was scheduled to relieve the crowding and retract the lower lip (Fig. 6). Non-symmetrical extraction was indicated to correct the 3mm midline deviation. Posterior bite turbos and elastics were also used to assist with the correction (Fig. 6). Molar relationship would be rectified by Class III elastics. Low-torque brackets were selected for the upper anterior teeth and high-torque for the lower anterior teeth, aiming to compensate for the Class III elastic mechanics.

Treatment Alternatives

Lefort I orthognathic surgery with bilateral sagittal split osteotomy (BSSO) was the surgical treatment option for the patient. However, the patient refused the surgical approach taking into account the higher

risk of complications and cost compared to the non-surgical options.

Treatment Progress

A 0.022-in slot Damon Q® fixed appliance (Ormco, Glendora, California) with passive self-ligating (PSL) brackets was selected along with all specified archwires and orthodontic auxiliaries.

Before active orthodontic treatment, the patient was referred to extract the UR5, UL5, LR4, and LL5 (Fig. 6). 2 weeks later, Damon Q® 0.022-in PSL brackets (Ormco, Glendora, CA) were bonded on the lower teeth with 0.014-in CuNiTi archwire engaged. Upside-down low-torque brackets were bonded on the lower anterior teeth to serve as high-torque brackets (Fig. 7) to help avoid torque loss during the retraction of the lower arch.

Two occlusal bite turbos were constructed with Fuji II® type II glass ionomer cement (GC America, Alsip IL) on the mandibular 2nd molars to open the intermaxillary space for correction of the anterior crossbite (Fig. 6).

After one month of aligning and leveling the lower arch, the upper dentition was also bonded with PSL brackets. Standard torque brackets were used on all upper teeth except for low-torque brackets on the maxillary lateral incisors to resist Class III mechanics, as well as high-torque brackets on the U3s.

Early light short Class III elastics (Parrot 5/6-in 2 oz, Ormco) were used for 1 month to correct the anterior crossbite. In the 3rd month of treatment, a positive overjet was achieved, and thus the bite turbos were removed.

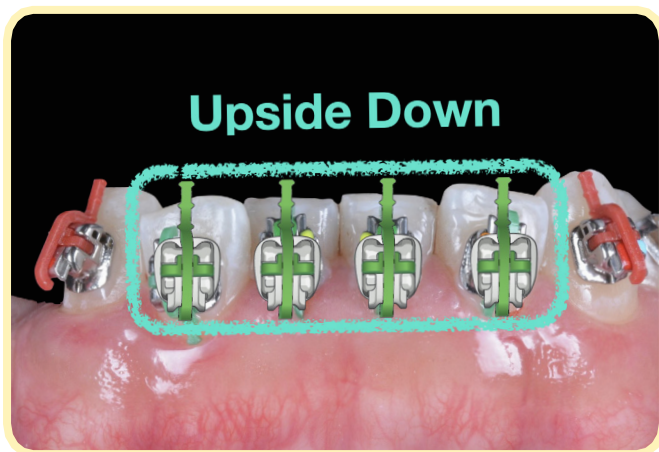
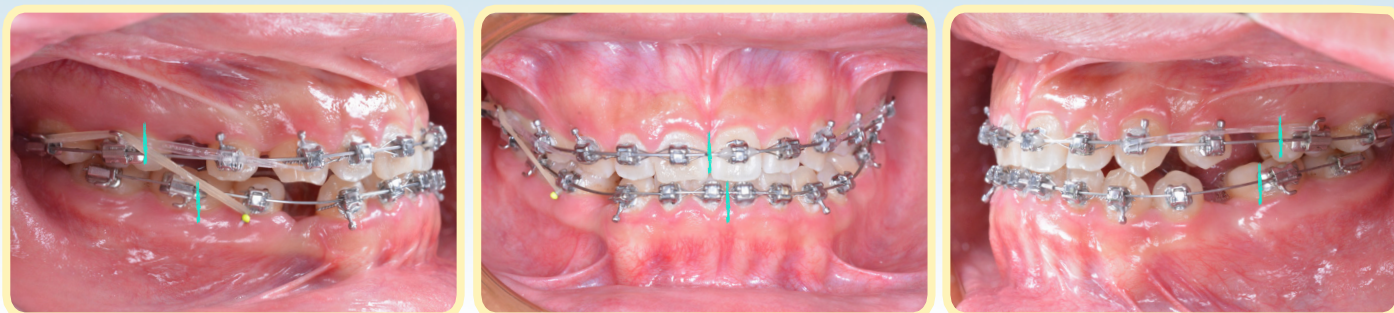


Fig. 7:
Low-torque brackets were positioned upside down to express high-torque in the lower anterior teeth.



■ Fig. 8:

Five-ring power-chain on both upper sides to close extraction spaces and Class III elastics on the right side to adjust molar relationship and midline.

A five-ring power chain was placed bilaterally from the maxillary canines to the maxillary 1st molars to close the extraction spaces in the 5th month of treatment. Class III elastics (Fox, 1/4-in, 3.5-oz; Ormco) were also applied on the right side to correct the lower arch and midline deficiency (Fig. 8).

In the 8th month, leveling and alignment was completed. Both archwires were changed to 0.016x0.025-in SS. Class II elastics (Fox, 1/4-in, 3.5-oz; Ormco) were used for two months on the left side to correct the midline (Fig. 17).

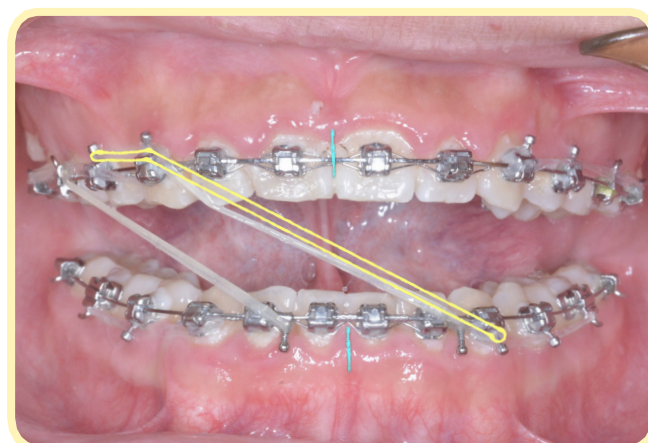
In the 10th month, buttons were placed on the lingual side of the upper 2nd premolars and upper 2nd molars bilaterally. Power chains were hooked between the buttons in order to avoid molar rotation during the closure of extraction spaces (Fig. 9).

In the 18th month, the extraction spaces were closed but midline deviation still remained. Elastics (Fox, 1/4-in, 3.5-oz; Ormco) were placed from the UR4 and UR3 to the LL3 to reinforce the adjustment of the midline deviation (Fig. 10).



■ Fig. 9:

Elastomeric chains were hooked on the palatal side to accelerate the speed of space closure and prevent distal rotation of the posterior teeth.



■ Fig. 10:

Low-torque brackets positioned upside down to express high-torque in the lower anterior and midline elastics are applied.

All fixed appliances were removed after 20 months of active treatment. All four extraction spaces were closed, and A-P Class I relationship was achieved. Gingivectomy and frenectomy were then performed with diode laser on the upper arch to enhance Pink and White esthetics (*Fig. 11*). After soft tissue adjustment, retention was accomplished with upper and lower clear overlay retainers. Also, a mandibular 3-3 lingual retainer was immediately bonded in place.

Results Achieved

Facial esthetics, gummy smile, and intermaxillary occlusion were significantly improved after 20 months of active treatment (*Fig. 12*). The canine relationships were corrected to Class I, and the molar relationship was significantly improved. The post-treatment panoramic radiograph documented acceptable root parallelism, except for UL6 and UL7 (*Fig. 14*). The superimposed cephalometric tracings illustrated that the upper 1st molar was protracted 5mm due to the closing of the extraction spaces with elastic force (*Fig. 13*). The axial inclination of the upper incisor ($U1-SN$) decreased 6° after treatment (117° to 111°), and the axial inclination of the lower incisors ($L1-MP$) was inevitably tipped lingually (87.5° to 68°). The upper and lower lips were both retruded

following the retraction of the anterior segments. The mandibular plane angle ($SN-MP$) was well-maintained (*Table 1*). The Cast-Radiograph Evaluation (*CRE*) score was 10 points, as shown in the supplementary Worksheet 2.¹¹ The Pink and White dental esthetic score was 3 points (*Worksheet 3*).¹² The patient was pleased with the final result.

Retention

To prevent the relapse of crowding, a fixed retainer was placed from canine to canine on the lower arch. Two ESSIX® (*Dentsply Sirona, Harrisburg, PA*) overlay retainers were provided to retain the leveling and alignment of the dentition. The patient was instructed to use the overlay retainers full time for the first month and only while sleeping thereafter.

Discussion

Class III camouflage treatment is often challenging for orthodontists, especially for cases with additional complexities. In general, treatment is usually delayed until the end of puberty for true skeletal Class III patients (*Table 2*).¹³ Although the suggested minimum age for skeletal Class III orthodontic intervention is 18 for both genders, it is important to



■ **Fig. 11:** Gingivectomy and frenectomy were performed to achieve improved tissue esthetics



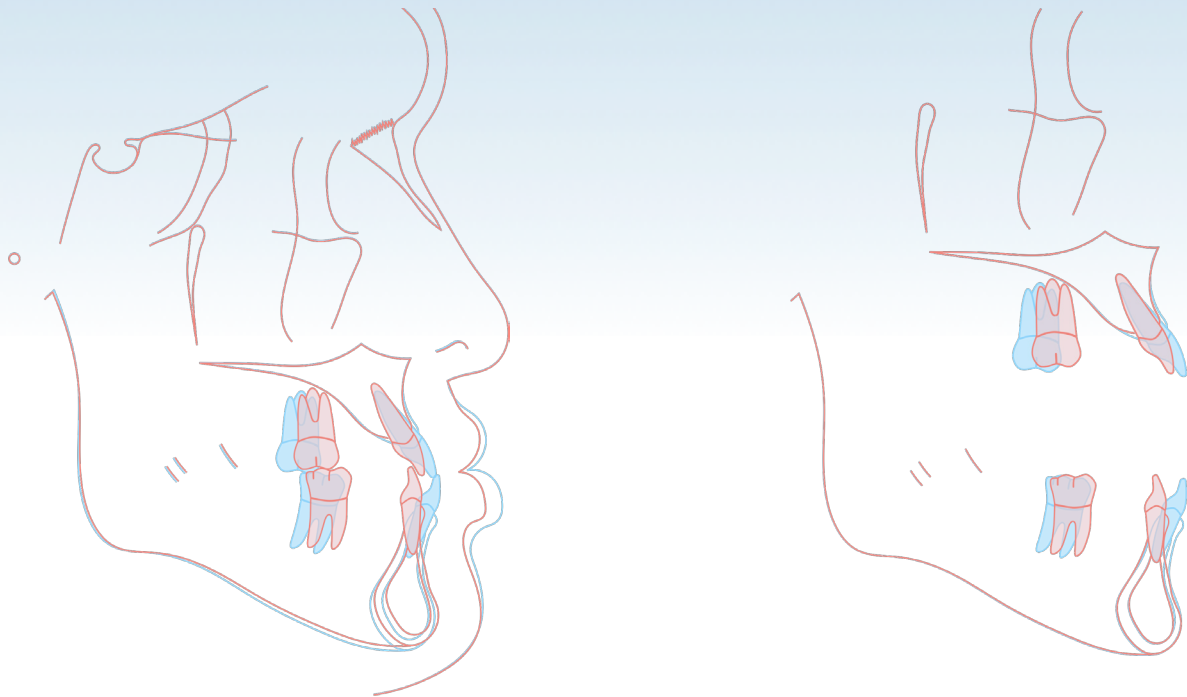
■ **Fig. 12:** Post-treatment facial and intraoral photographs

In the lower occlusal view (bottom right), the inter-proximal area between LL4 and LL6 (blue arrow) is less desirable than between LR5 and LR6 (green arrow) since L4 has a smaller lingual cusp compared to L5, which may lead to higher occurrence of food impaction. See text for details.

inform patients of possible changes due to potential future growth. Therefore, an accurate diagnosis as well as proper treatment timing and treatment plans are crucial to achieve favorable outcomes.

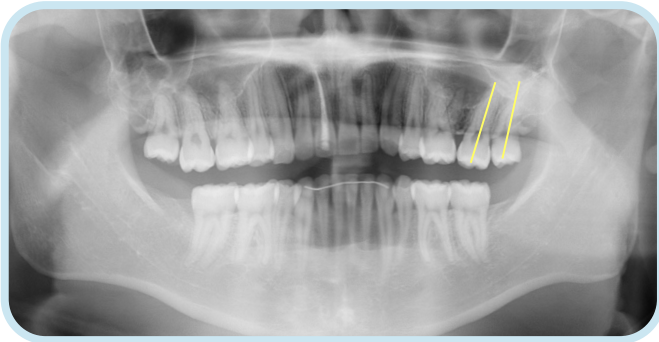
For this patient, the growth of mandible was complete before treatment (Table 2). Therefore, the orthognathic facial profile in centric relation (C_R)

position implied a good prognosis with camouflage treatment, which was carried out with a satisfying result (Figs. 12-15) in only 22 months without orthognathic surgery. Treatment progress is documented in Figs. 16-18. The major problems in this case were (1) full-cusp Class III malocclusion, (2) anterior crossbite, and (3) dental midline deviation (3mm).



■ Fig. 13:

Superimposed cephalometric tracings (blue: pre-treatment; red: post-treatment) indicate that the pre-treatment Class III molar relationship was corrected to Class I due to 5mm of maxillary 1st molar protraction which was a benefit from the U5s extraction. However, inevitable lingual tipping of the lower incisors occurred due to the Class III camouflage treatment.



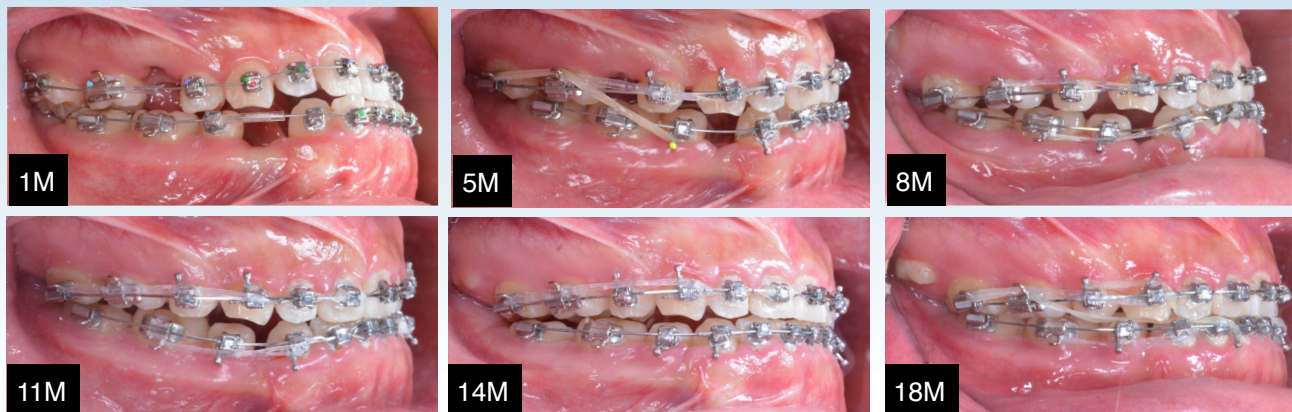
■ Fig. 14: Post-treatment panoramic radiograph

Full-Cusp Class III Malocclusion

In order to correct anterior crossbite and improve posterior intercuspation, the Extraction Decision Table of Chang (Table 3) was used to assess the necessity for extractions. In Class III camouflage treatments, U5 and L4 extractions are usually the

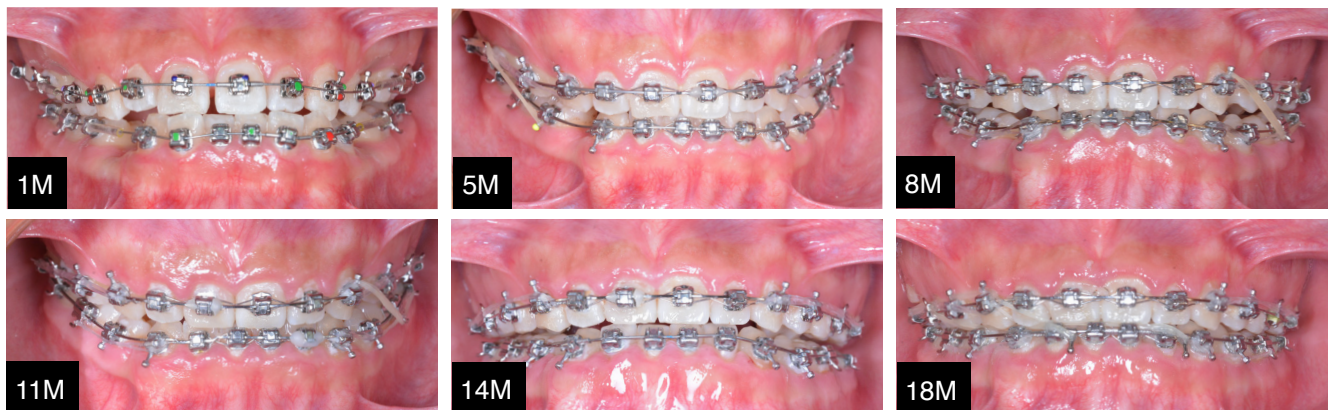


■ Fig. 15: Post-treatment cephalometric radiograph



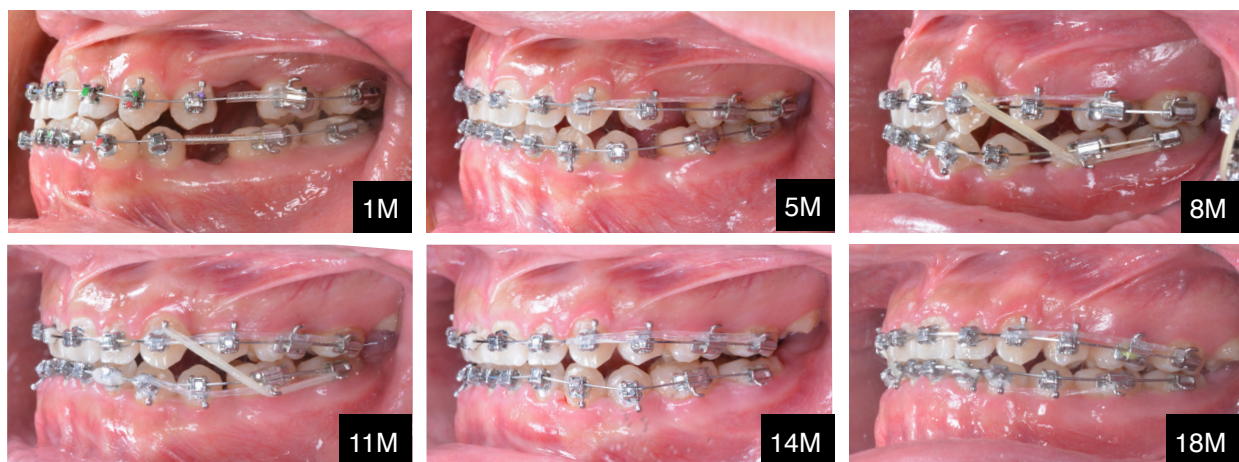
■ Fig. 16:

Treatment progression from the right buccal view. In the 5th month, Class III elastics (Fox, 1/4-in, 3.5-oz; Ormco) were used on the right side to correct the molar relationship and the midline deficiency.



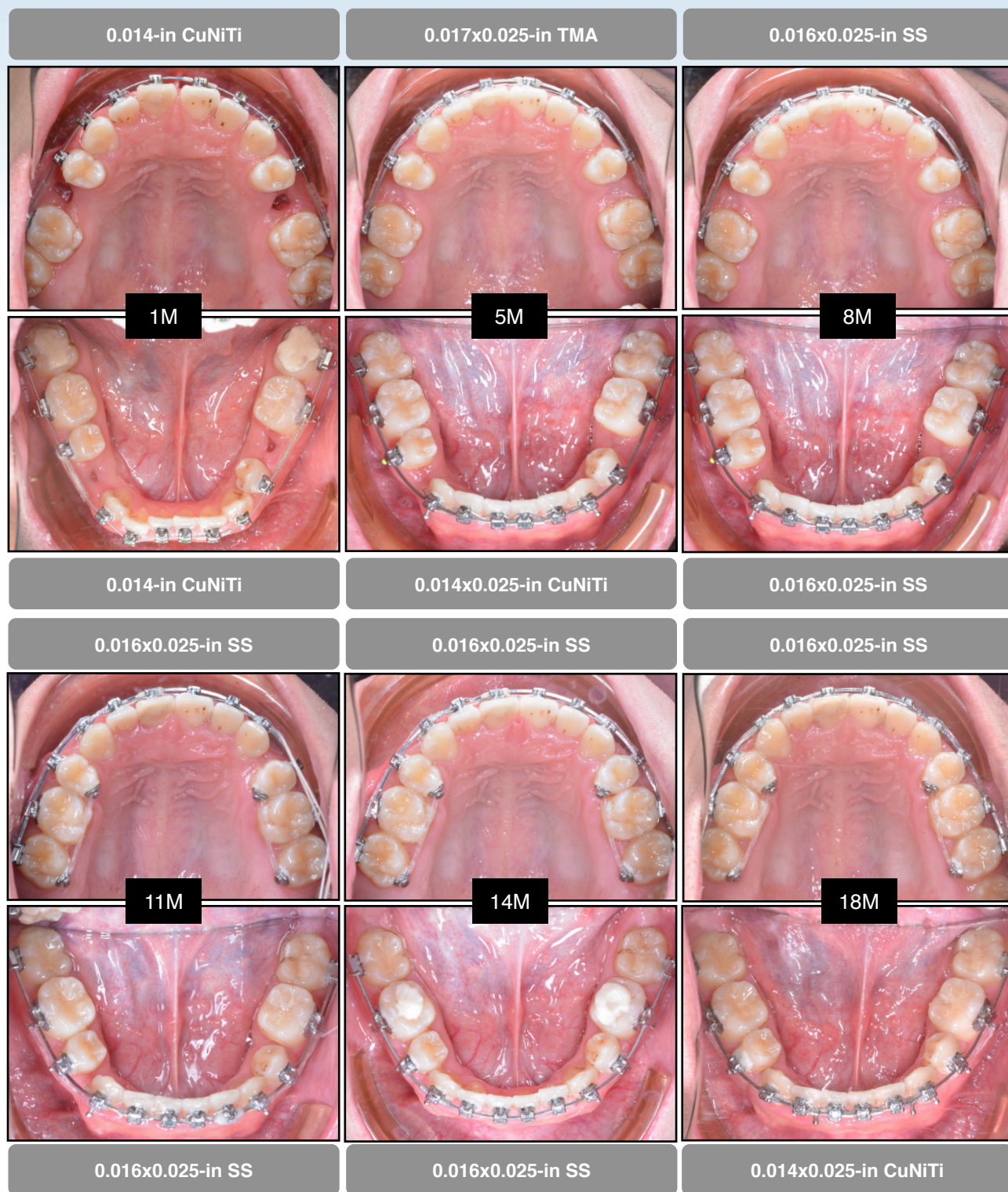
■ Fig. 17:

Treatment progression from the frontal view. High torque brackets for the lower arch and low or standard torque brackets for the upper incisors were chosen to compensate for the reaction to the Class III elastics mechanism.



■ Fig. 18:

Treatment progression from the left buccal view. In the 8th month, Class II elastics (Fox, 1/4-in, 3.5-oz; Ormco) were used for two months on the left side to correct the midline and to close the intermaxillary space.



■ Fig. 19:

Treatment progression from the occlusal view. Compared to the lower arch, the upper arch followed a standard Damon Q® wire sequence. It was easier compared to the lower arch.

most common solution. For this case, the two factors in the decision table favoring extractions were the protrusive profile and anterior incisal inclination. Furthermore, the patient's perception for extractions was positive. As a result, asymmetrical premolar extraction in each quadrant was executed to provide spaces for differential space closure to correct the midline deviation.

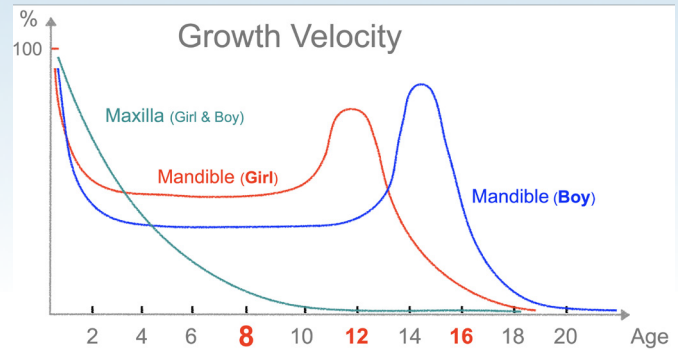
Anterior Crossbite Correction

For the anterior crossbite correction, bite turbos were placed on the occlusal surface of the lower molars in order to open the bite (*Fig. 6*).^{14,15} Once the intermaxillary space was created, Ni-Ti wire was placed into the bracket to align and level the dentition without the risk of occlusal interference. Bite turbos were bonded on the posteriors rather than anteriors due to a misaligned lower anterior dentition; also, alignment of the anterior teeth would be inhibited by an anterior inclined bite plate.

In general, Class III camouflage treatment flares the upper arch and retroclines the lower anteriors (*Figs. 9 and 20*). Therefore, high-torque brackets were bonded on the lower anterior teeth to prevent retroclination. On the contrary, low-torque or standard-torque brackets were selected for the upper anterior segment.

Midline Deviation

To correct midline deviation, asymmetrical extraction in combination with intermaxillary elastics may be a reasonable solution to meet the requirement (*Fig. 10*). In general, extraction of the U5 and L4 bilaterally is the preferred choice in most Class III camouflage



■ Table 2: Growth velocity of the mandible in different gender

treatments. Since the lower midline deviated 3mm to the left in this case, LL5 was extracted to enhance correction of the midline deviation (*Fig. 6*). However, the interproximal area between LL4 and LL6 may encounter food impaction more easily since the LL4 did not have a lingual cusp, so the interproximal contact area may be less desirable than LL5 and LL6 (*Fig. 12*). At the end of treatment, the 3mm midline deviation improved to 1mm left for the lower arch (*Fig. 21*).

| | Ext | Non |
|---------------------|------------|----------|
| 1. Profile | Protrusive | Straight |
| 2. Md. angle | High | Low |
| 3. Bite | Open | Deep |
| 4. Ant. inclination | Flaring | Flat |
| 5. Crowding | > 7 mm | None |
| 6. Decay/ missing | Present | ? |
| 7. P't perception | Ok | No |
| 8. Etc... | | |

■ Table 3: Chang's Extraction Decision Table



■ Fig. 20:

Class III elastic mechanics: a counterclockwise rotation appears in the lower arch when using Class III elastics. The bracket selection should be high-torque (HQ) for the lower anterior and low-torque (LQ) for the upper anterior segments to counteract the force.



■ Fig. 21:

Midline was significantly improved after 20 months of treatment.

Conclusions

This difficult skeletal malocclusion was treated to an acceptable result without orthognathic surgery in only 20 months. With Chang's Extraction Decision Table (Table 3), a feasible treatment plan was completed with a pleasant outcome. In retrospect, the treatment time may have been decreased by using buccal shelf miniscrews. In addition, this case finished with a 67.5° L1-to-MP angle. Therefore, long-term follow-up was indicated to assure the continuous stability and maintenance of the occlusion.

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Discrepancy Index Worksheet

TOTAL D.I. SCORE

27

OVREJET

| | | |
|----------------------|---|--------|
| 0 mm. (edge-to-edge) | = | |
| 1 - 3 mm. | = | 0 pts. |
| 3.1 - 5 mm. | = | 2 pts. |
| 5.1 - 7 mm. | = | 3 pts. |
| 7.1 - 9 mm. | = | 4 pts. |
| > 9 mm. | = | 5 pts. |

Negative OJ (x-bite) 1 pt. per mm. Per tooth =

Total = 5

OVERBITE

| | | |
|------------------|---|--------|
| 0 - 3 mm. | = | 0 pts. |
| 3.1 - 5 mm. | = | 2 pts. |
| 5.1 - 7 mm. | = | 3 pts. |
| Impinging (100%) | = | 5 pts. |

Total = 0

ANTERIOR OPEN BITE

0 mm. (Edge-to-edge), 1 pt. per tooth
Then 1 pt. per additional full mm. Per tooth

Total = 0

LATERAL OPEN BITE

2 pts. per mm. Per tooth

Total = 0

CROWDING (only one arch)

| | | |
|-------------|---|--------|
| 1 - 3 mm. | = | 1 pt. |
| 3.1 - 5 mm. | = | 2 pts. |
| 5.1 - 7 mm. | = | 4 pts. |
| > 7 mm. | = | 7 pts. |

Total = 7

OCCLUSION

| | | |
|------------------------|---|--------------------------|
| Class I to end on | = | 0 pts. |
| End on Class II or III | = | 2 pts. per side |
| Full Class II or III | = | 4 pts. per side |
| Beyond Class II or III | = | 1 pt. per mm. additional |

Total = 6

LINGUAL POSTERIOR X-BITE

1 pt. per tooth Total = 0

BUCCAL POSTERIOR X-BITE

2 pts. Per tooth Total = 0

CEPHALOMETRICS (See Instructions)ANB $\geq 6^\circ$ or $\leq -2^\circ$ = 4 pts.Each degree $< -2^\circ$ x 1 pt. =Each degree $> 6^\circ$ x 1 pt. =

SN-MP

 $\geq 38^\circ$ = 2 pts.Each degree $> 38^\circ$ x 2 pts. = $\leq 26^\circ$ = 1 pt.Each degree $< 26^\circ$ x 1 pt. =I to MP $\geq 99^\circ$ = 1 pt.Each degree $> 99^\circ$ x 1 pt. =

Total = 4

OTHER (See Instructions)

| | | |
|---|----------------|-----|
| Supernumerary teeth | _____ x 1 pt. | = |
| Ankylosis of perm. Teeth | _____ x 2 pts. | = |
| Anomalous morphology | _____ x 2 pts. | = |
| Impaction (except 3 rd molars) | _____ x 2 pts. | = |
| Midline discrepancy (≥ 3 mm) | @ 2 pts. | = 2 |
| Missing teeth (except 3 rd molars) | _____ x 1 pt. | = |
| Missing teeth, congenital | _____ x 2 pts. | = |
| Spacing (4 or more, per arch) | _____ x 2 pts. | = |
| Spacing (Mx cent. diastema ≥ 2 mm) | @ 2 pts. | = |
| Tooth transposition | _____ x 2 pts. | = |
| Skeletal asymmetry (nonsurgical tx) | @ 3 pts. | = 3 |
| Addl. treatment complexities | _____ x 2 pts. | = |

Identify:

Total = 5

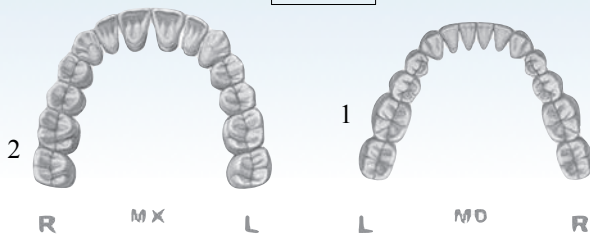
Cast-Radiograph Evaluation

Total Score:

10

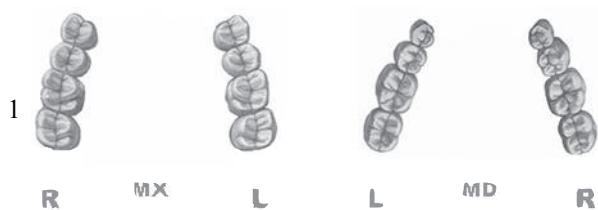
Alignment/Rotations

3



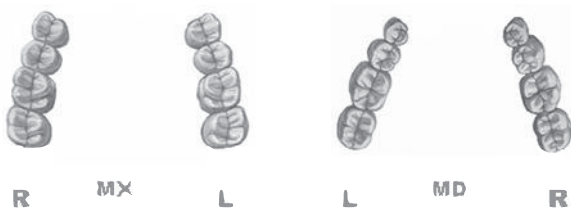
Marginal Ridges

1



Buccolingual Inclination

0



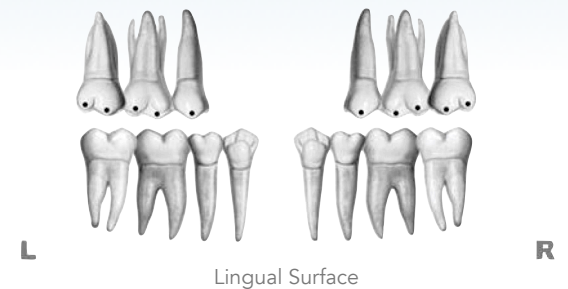
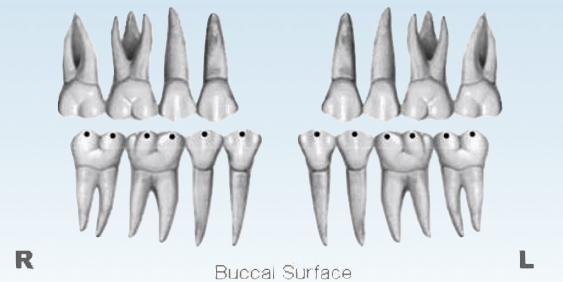
Overjet

0



Occlusal Contacts

0



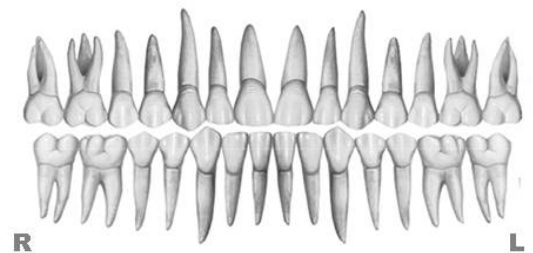
Occlusal Relationships

4



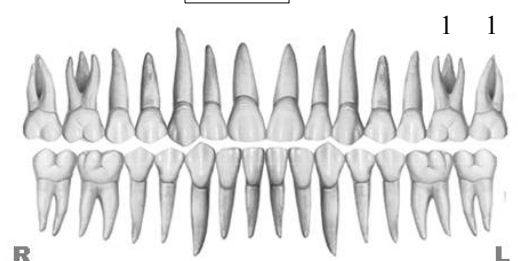
Interproximal Contacts

0



Root Angulation

2



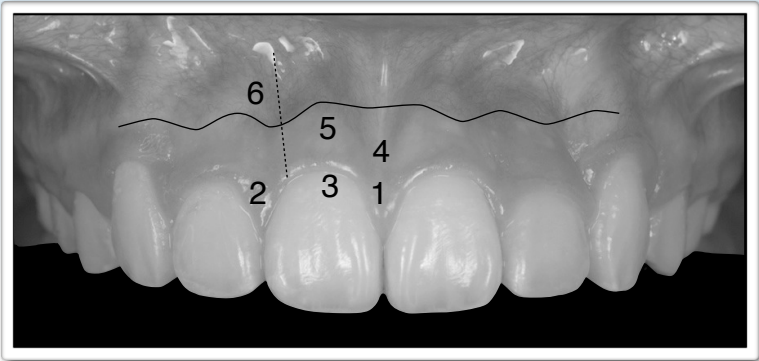
INSTRUCTIONS: Place score beside each deficient tooth and enter total score for each parameter in the white box. Mark extracted teeth with "X". Second molars should be in occlusion.

IBOI **Pink** and **White** Esthetic Score

Total Score =

3

1. **Pink** Esthetic Score



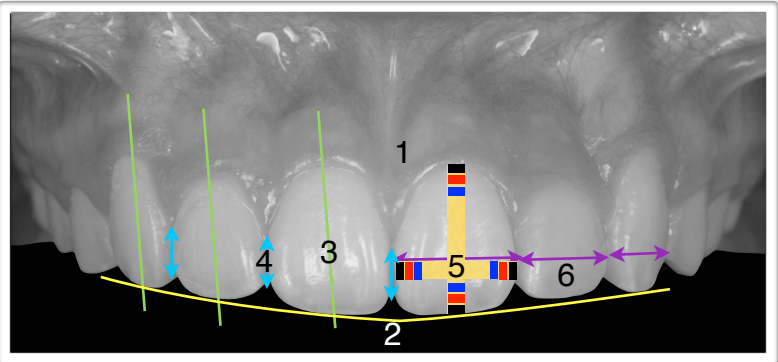
Total =

1

| | | | |
|---------------------------------|---|---|---|
| 1. M and D Papillae | 0 | 1 | 2 |
| 2. Keratinized Gingiva | 0 | 1 | 2 |
| 3. Curvature of Gingival Margin | 0 | 1 | 2 |
| 4. Level of Gingival Margin | 0 | 1 | 2 |
| 5. Root Convexity (Torque) | 0 | 1 | 2 |
| 6. Scar Formation | 0 | 1 | 2 |

| | | | |
|---------------------------------|---|---|---|
| 1. M and D Papillae | 0 | 1 | 2 |
| 2. Keratinized Gingiva | 0 | 1 | 2 |
| 3. Curvature of Gingival Margin | 0 | 1 | 2 |
| 4. Level of Gingival Margin | 0 | 1 | 2 |
| 5. Root Convexity (Torque) | 0 | 1 | 2 |
| 6. Scar Formation | 0 | 1 | 2 |

2. **White** Esthetic Score (for Micro-esthetic)



Total =

2

| | | | |
|--|---|---|---|
| 1. Midline | 0 | 1 | 2 |
| 2. Incisor Curve | 0 | 1 | 2 |
| 3. Axial Inclination (5° , 8° , 10°) | 0 | 1 | 2 |
| 4. Contact Area (50% , 40% , 30%) | 0 | 1 | 2 |
| 5. Tooth Proportion | 0 | 1 | 2 |
| 6. Tooth to Tooth Proportion | 0 | 1 | 2 |

| | | | |
|--|---|---|---|
| 1. Midline | 0 | 1 | 2 |
| 2. Incisor Curve | 0 | 1 | 2 |
| 3. Axial Inclination (5° , 8° , 10°) | 0 | 1 | 2 |
| 4. Contact Area (50% , 40% , 30%) | 0 | 1 | 2 |
| 5. Tooth Proportion | 0 | 1 | 2 |
| 6. Tooth to Tooth Proportion | 0 | 1 | 2 |

優惠期限 自2021/10/01-12/25止

隱形矯正必備 Clear Aligner

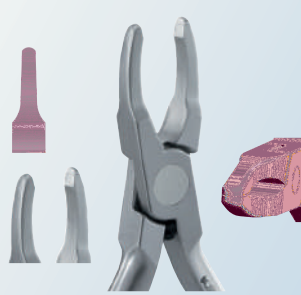
OLS-1510

1.5mm Point Elevation



OLS-1520

Reverse

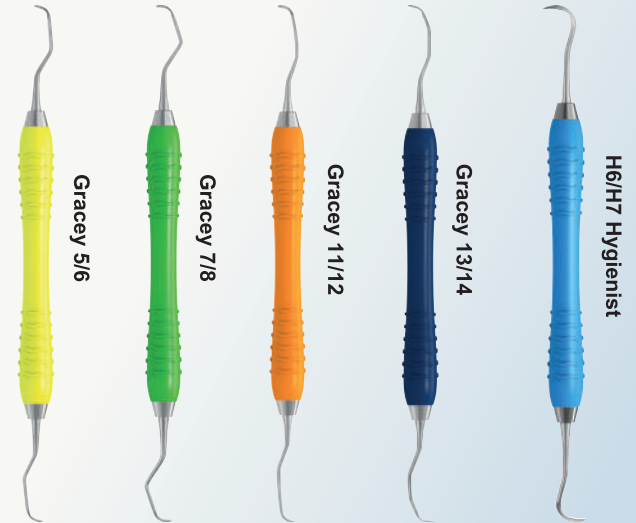


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International Association for **O**rdodontists & **I**mplantologists

Join the **iAOI** the future of dentistry!

About our association-iAOI

International Association of Orthodontists and Implantologists (iAOI) is the world's first professional association dedicated specifically for orthodontists and implantologists. The Association aims to promote the collaboration between these two specialties and encourage the combined treatment of orthodontic and implant therapy in order to provide better care for our patients.

How to join iAOI?

Certified members of the Association are expected to complete the following three stages of requirements.

1. Member

Doctors can go to <http://iaoi.pro> to apply for membership to join iAOI. Registered members will have the right to purchase a workbook in preparation for the entry exam.

2. Board eligible

All registered members can take the entry exam. Members will have an exclusive right to purchase a copy of iAOI workbook containing preparation materials for the certification exam. The examinees are expected to answer 100 randomly selected questions out of the 400 ones from the iAOI workbook. Those who score 70 points or above can become board eligible.

3. Diplomate

Board eligible members are required to present three written case reports, one of which has to be deliberated verbally. Members successfully passing both written and verbal examination will then be certified as Diplomate of iAOI.

4. Ambassador

Diplomates will have the opportunity to be invited to present six ortho-implant combined cases in the iAOI annual meeting. Afterwards, they become Ambassador of iAOI and will be awarded with a special golden plaque as the highest level of recognition in appreciation for their special contribution.



For more information on benefits and requirements of iAOI members, please visit our official website: <http://iaoi.pro>.

iAOI Ambassador & Diplomat

國際矯正植牙大使與院士



Ambassadors

Dr. Kenji Ojima



Dr. 林詩詠
Joshua Lin



38 pts

Dr. Diego
Peydro Herrero



Dr. 張銘珍
Ming-Jen Chang



18 pts

Dr. 曾令怡
Linda Tseng



16 pts

New Dr. 陳俊宏
Chun-Hung Chen



17 pts

Ambassador (大使):

* One who has published 9+ case reports in JDO.

◆ Keynote speakers for iAOI annual workshops

▲ Case report(s) published at least once in referral journals.

● Referral journals/Research paper - 3 points
ABO case report - 2 points
Clinical tip - 1 point

Diplomates

Dr. 徐玉玲
Lynn Hsu



29 pts

Dr. 李雙安
Angle Lee



26 pts

Dr. 蘇荃瑋
Bill Su



24 pts

Dr. 葉信吟
Hsin-Yin Yeh



20 pts

Dr. 徐重興
Eric Hsu



20 pts

Dr. 黃育新
Yu-Hsin Huang



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Richie Huang



16 pts

Dr. 邱上珍
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Sabrina Huang



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Dr. 鄭惠文
Joy Cheng



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Dr. 林彥君
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Dr. 林森田
Chris Lin



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5 pts

Dr. 彭緯綸
Wei-Lun Peng



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Dr. 呂詩薇
Julie Lu



4 pts