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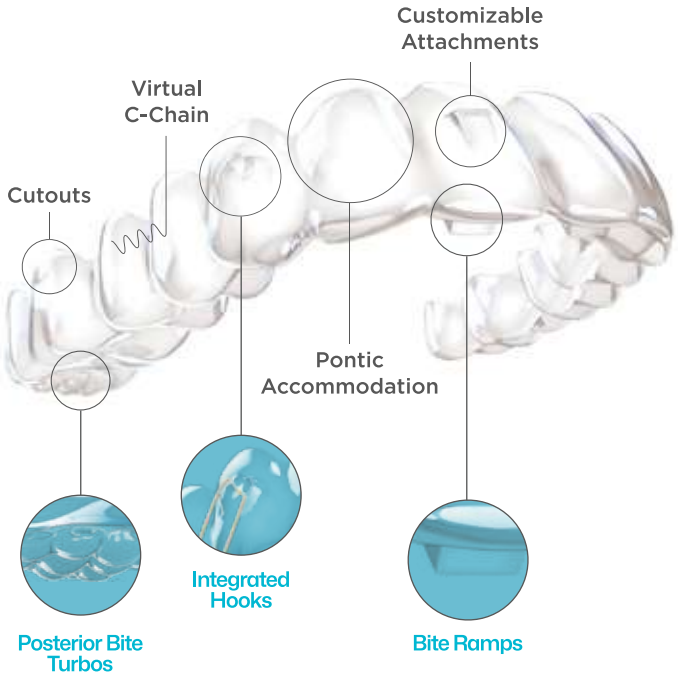

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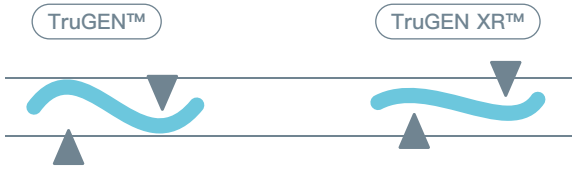

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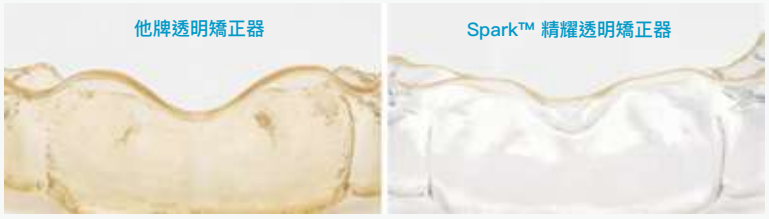

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2025 第十七屆

貝多芬 矯正精修班

時間：週二上午 09:20-12:00

地點：金牛頓教育中心（新竹市建中一路 25 號 2 樓）

上課日期：

2025　3/18、4/15、5/13、6/10、7/8、8/19、9/9、10/21、11/11、12/9、1/13/26'

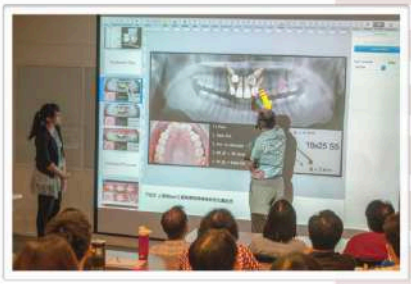
全新的第十七屆貝多芬精修班是由國際知名講師-張慧男醫師主持，並偕同貝多芬牙醫住院醫師群聯合講授，內容包含下列主題：

1. 精選矯正權威期刊 AJODO 的文章做文獻分析與評讀。
2. 精緻完工 ABO 案例報告，其中因應數位矯正的世界趨勢，Invisalign 病例為課程探討的主要內容之一。
3. 分享臨床上常犯的錯誤以及解決方法。

2025 貝多芬精修班內容豐富精彩，讓您經由每個月一次的課程，在面對各式的臨床案例時，更能游刃有餘、得心應手。

學習目的：

研讀最新趨勢文章可以窺知世界文獻公認的治療方式，而藉由評論文章的優缺點不僅能夠訓練判斷與思考能力，更可以清楚比較作法上的不同，達到完整理解治療方向、內容與穩定性的目標。



報名專線：03-5735676 #218 陳小姐

Class II Division 2 Malocclusion with Severe Deep Bite, Unilateral Posterior Scissors Bite, and Missing Lower First Molar in an Adult Treated with Miniscrews and Bite Turbos

Abstract

A 27-year-old female with Class II division 2 malocclusion, severe deepbite, right posterior scissors bite, and a missing right mandibular first molar presented for orthodontic consultation. After 49 months of treatment, intrusion of the incisors in both arches and maxillary whole arch distalization were successfully achieved with anchorage provided by temporary skeletal anchorage devices (TSADs), including an incisal screw and bilateral infra-zygomatic crest (IZC) screws. The left mandibular first molar was extracted due to poor prognosis, and then the symmetric lower first molar spaces were close with bilateral L-shaped Class II elastics and power chains. Anterior bite turbos, anterior root torquing (ART) springs, and pre-torqued archwires were used to correct the deep bite and increase the inclination of maxillary incisors. An ideal dentofacial result was achieved in a minimally invasive manner. (J Digital Orthod 2024;76:16-33)

Key words:

Class II division 2, deep bite, unilateral scissors crossbite, miniscrews, bite turbos, whole arch distalization, molar extraction space closure, anterior root torquing spring

Introduction

Deep bite malocclusion is usually treated by intrusion of the anterior teeth and/or extrusion of posterior teeth in either or both arches.[1-5] The most appropriate treatment option considers the patient's skeletal pattern and other occlusal characteristics to achieve a harmonious profile, functional occlusion, and long-term stability.[6]

Scissors bite (buccal crossbite) is a malocclusion where the palatal cusp of a maxillary tooth is buccal to the mandibular buccal cusp. Brodie termed this malocclusion a "Brodie bite" when the mandibular teeth are telescoped within the maxillary arch.[7] Temporary skeletal anchorage devices (TSADs) can be used to correct a scissors bite.[1,8]

Given the low likelihood of mandibular growth in adult patients, non-extraction treatment for Class II malocclusion usually requires maxillary whole arch distalization to achieve an ideal overjet.[9] Since the use of mini-screws combined with fixed labial appliances was first introduced by Park et al.[10,11] in 2004, TSAD-based interventions have been reported to be effective in retracting the maxillary posterior teeth[2,8] with fewer unwanted side effects.[12]

This case report describes the comprehensive treatment of a 27-year-old female patient with Class

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Jia-Hong Lin
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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)

Fig. 1: *Pre-treatment facial and intraoral photographs*

II division 2 malocclusion, severe deep bite, unilateral scissors bite, and a missing right mandibular first molar. Intrusion of the incisors and maxillary whole arch distalization were successfully achieved by anchorage provided by TSADs.

This report uses a modified Palmer notation for dental nomenclature. The dentition is divided into four quadrants: upper right (UR), upper left (UL), lower right (LR), and lower left (LL). Teeth are numbered from 1 to 8 in each quadrant starting at the midline. For example, the lower right first molar is designated as LR6.

History and Etiology

A 27-year old female sought orthodontic consultation for a deep bite and prosthetic rehabilitation of a missing tooth (Fig. 1). She also complained of pain in the left temporomandibular joint (TMJ). No relevant medical or dental history was reported.

Clinical examination revealed a straight facial profile with a slight chin deviation to the left. Intraoral examination showed a severe deep bite, a right posterior buccal (scissors) crossbite, and a missing LR6. The overjet was 2 mm, and the overbite was 100%, with the mandibular incisors impinging on the palate. The molar relationship on the right side could not be assessed due to the missing LR6, but both canines and buccal segments had a Class II tendency. The lower dental midline was shifted about 3 mm to the left in centric occlusion (C_O) but shifted to the right when the patient opened her mouth (Fig. 2), indicating a functional shift that apparently contributed to her temporomadibular joint (TMJ) discomfort. There was no significant crowding in either arch.

Panoramic radiography (Fig. 3) revealed that LL6 had received endodontic treatment, but a radiolucent periapical lesions were evident. Lateral cephalometric radiographs (Fig. 4) showed skeletal mandibular retrognathism (SNB, 74°) with an ANB angle of 5°. Severely retroclined maxillary and mandibular incisors (U1-SN, 69°; L1-MP, 82°) were noted. Pre-treatment dental models (casts) are shown in Fig. 5.

Diagnosis

Facial

- Facial Convexity: Straight (G-Sn-Pg', 9°)
- Lip Protrusion: *Within normal limits (WNL) (upper and lower lips were -1 mm and -2 mm to the E-line respectively)*

Fig. 2: *Frontal view of pre-treatment intraoral photographs (mouth open slightly)*

Fig. 3: *Pre-treatment panoramic radiograph*

Fig. 4: *Pre-treatment cephalometric radiograph*

Fig. 5: *Pre-treatment dental models (casts)*

Skeletal

- Skeletal Class I (*ANB, 5˚*)
- Mandibular Plane Angle: *WNL (SN-MP, 35˚; FMA, 28˚)*

CEPHALOMETRIC SUMMARY			
	PRE-TX	POST-TX	DIFF.
SKELETAL ANALYSIS			
SNA˚ (82˚)	79˚	78˚	1˚
SNB˚ (80˚)	74˚	75˚	1˚
ANB˚ (2˚)	5˚	3˚	2˚
SN-MP˚ (32˚)	35˚	35˚	0˚
FMA˚ (27˚)	28˚	28˚	0˚
DENTAL ANALYSIS			
U1 TO NA mm (4mm)	2	2	0
U1 TO SN˚ (104˚)	69˚	88˚	19˚
L1 TO NB mm (4mm)	1	1	0
L1 TO MP˚ (90˚)	82˚	92˚	10˚
FACIAL ANALYSIS			
E-LINE UL (-1mm)	1	3	2
E-LINE LL (0 mm)	2	5	3
%FH: Na-ANS-Gn (56%)	55%	56%	1%
Convexity: G-Sn-Pg (13˚)	9˚	8˚	1˚

Table 1: *Cephalometric Summary*

Dental

- Sagittal
  - Canine relationship: *Left - Class II; right - Class II*
  - Molar relationship: *Left - Class I; right - could not be defined.*
  - Overjet: *2 mm*
  - Upper and Lower incisor: *Retroclined (U1-SN, 69˚; L1-MP, 82˚)*

- Transverse
  - Crossbite: *LR lingual tipping (scissors bite)*
- Vertical
  - Overbite: *8 mm (exceeding 100% and impinging in the palate)*
  - U1 and L1 extruded
  - Deep curve of Spee
- Others
  - Missing: *LR6*

American Board of Orthodontics (ABO) Discrepancy Index (DI): 11 points (Worksheet 1).

Treatment objectives

1. Level and align both arches.
2. Intrude and flare both upper and lower incisors.
3. Prosthetic rehabilitation or space closure of the missing tooth (LR6)
4. Correct right posterior buccal crossbite.
5. Maxillary whole-arch distalization may be needed.

Treatment plan

The overall objectives were to correct the deep bite, procline and intrude both upper and lower incisors, correct the right posterior crossbite, and address the missing LR6 either through prosthetic rehabilitation or space closure. Given the questionable prognosis of LL6, two options were considered.

First Option:

A non-extraction treatment. Procline the upper incisors using high-torque brackets and anterior root torquing (ART) springs. Intrude and procline the lower incisors using composite bite turbos placed on the palatal side of the upper central incisors. The space for LR6 is maintained with an open coil spring, and an implant is planned to be placed after achieving ideal alignment.

Second Option:

Achieve symmetric space closure in the lower arch following the extraction of LL6. Extraction in the maxillary arch is unnecessary because the retroclined upper incisors may not be corrected due to the bowing effect. To correct the potentially large overjet, the upper arch is retracted using anchorage provided by infrazygomatic crest (IZC) miniscrews bilaterally. To prevent the occlusal plane from dumping, maintain vertical control of the upper incisors by anchorage provided by an incisal miniscrew placed between the upper central incisors.

After a thorough discussion of the two options with the patient, the first option was preferred as the LL6 was asymptomatic at the time, its prognosis was fair, and it was expected to deliver a near-ideal dentofacial result in a minimally invasive manner.

Appliances and Treatment Progress

A Damon Q® fixed appliance with passive self-ligating (PSL) brackets (Ormco, Glendora, CA) was initially bonded only on all upper teeth. High-torque brackets were chosen for the central incisors to procline their decreased inclination.

Composite bite turbos (Fig. 6) were placed on the palatal side of the upper central incisors to intrude lower incisors and open the bite to establish clearance for placing brackets in the lower arch. PSL brackets were subsequently bonded on the lower arch. Low-torque brackets were chosen for the four incisors to prevent excessive proclination. Crossbite elastics were utilized between buccal side of UR6 and lingual side of LR7. After initial alignment and leveling, an ART spring (Fig. 7) was utilized in the upper arch to further procline the anterior teeth.

In the 8th month, the previously asymptomatic LL6 started to cause discomfort, leading to a change in the treatment plan. Given the poor diagnosis of LL6, after thorough discussion with the patient, the second treatment option became the treatment plan. The LL6 was then extracted, followed by space closure using power chains and bilateral L-shaped buccal Class II elastics.

In the 13th month, after flaring the upper incisors, the ART spring was removed and an incisal mini screw was inserted between the root apices of UR1 and UL1 to intrude the upper anterior teeth. Additionally, an extra-alveolar miniscrew was installed in each IZC to retract the upper arch. Cone beam computed tomography (CBCT) documented that the miniscrews were buccal to the roots of the respective molars, and were well-anchored in the cortical plate (Fig. 8). Extra-alveolar insertion of the IZC miniscrew was crucial for whole-arch retraction of the maxillary dentition without tooth root interference.[8]

In the 49th month, the incisor and two IZC miniscrews were removed, along with all other appliances. Figs. 9 and 10 are panels of intraoral occlusal photographs showing the treatment progress in the maxillary and mandibular arches, respectively. Immediately after the fixed appliances were removed, a maxillary 2-2 and a mandibular 3-3 lingual retainers (sectional twisted wires) were bonded in place.

Fig. 6: *Occlusal view of composite bite turbos constructed at two months (2M) by placing composite resin on the lingual surfaces of the upper central incisors*

Results Achieved

After 49 months of active treatment, the severe overbite with a missing molar was significantly improved. Molar Class I relationships were achieved

Fig. 7: *Frontal view of ART spring applied at eight months (8M)*

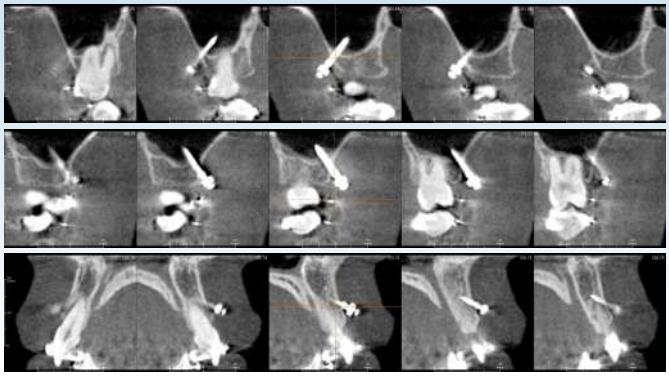

Fig. 8:
CBCT slices in the 13th month show the extra-alveolar insertion of infra-zygomatic crest bone screws on the right (upper) and left (middle) sides, and incisor bone screw between the root apex of UR1 and UL1 (lower).

on both sides. The malocclusion (DI = 11) was treated to optimal alignment (CRE = 15) with an excellent Pink esthetic score of 0 and a White esthetic score of 1 (see worksheets at the end of this case report). Two discrepancies from an ideal outcome were noted: (1) the buccolingual inclination of UR7 and UL7, and (2) their occlusal contacts with LR8 and LL8 respectively. Open contact resulted from the tip-back of the maxillary second molar, which is normal in whole arch distalization treatments. Posttreatment panoramic and lateral cephalometric radiographs are shown in Figs. 11 and 12, respectively.

Although both UR7 and UL7 were slightly buccally tipped, the occlusion was stable at the end of the treatment (Fig. 13). Superimposition of the pre-treatment and posttreatment cephalometric tracings revealed the distalization of upper molars, mesialization of lower molars, intrusion and proclination of both upper and lower incisors, and forward movement of the mandible (Fig. 14).

The superimposition on the mandible shows an upward displacement of the cephalometric landmark articulare after treatment. This is due to the forward and downward displacement of the mandible following the removal of dental interference. Fig. 15 is a panel of posttreatment facial and intraoral photographs. The improvement in chin deviation and dental midline was evident as a result of the crossbite correction in the right buccal segment and the resolution of the functional shift.

Assessment of Specific Objectives

Maxilla (all three planes)**:**

- A-P: *maintained*
- Vertical: *maintained*
- Transverse: *maintained*

Mandible (all three planes)**:**

- A-P: *advanced*
- Vertical: *maintained*
- Transverse: *maintained*

Maxillary Dentition:

- A-P: *retraction and increase in palatal root torque of the central incisors; whole arch distalization*
- Vertical: *intrusion of the incisors*
- Inter-Molar Width: *increased (whole arch distalization)*

Mandibular Dentition:

- A-P: *retraction and increase in lingual root torque of the incisors; mesialization of the molars*

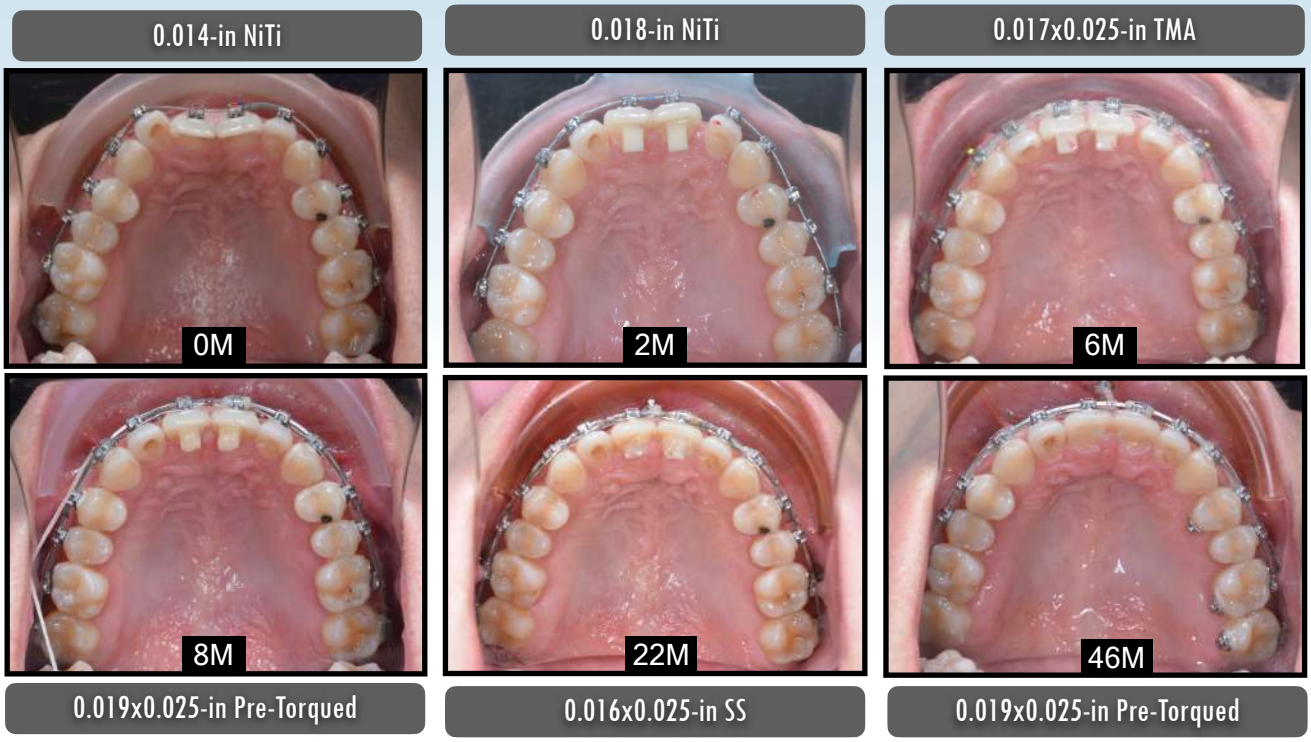

Fig. 9:
Treatment progression from the maxillary occlusal view in months (M) with archwire specification is shown from the start of treatment (0M) to forty-six months (46M).

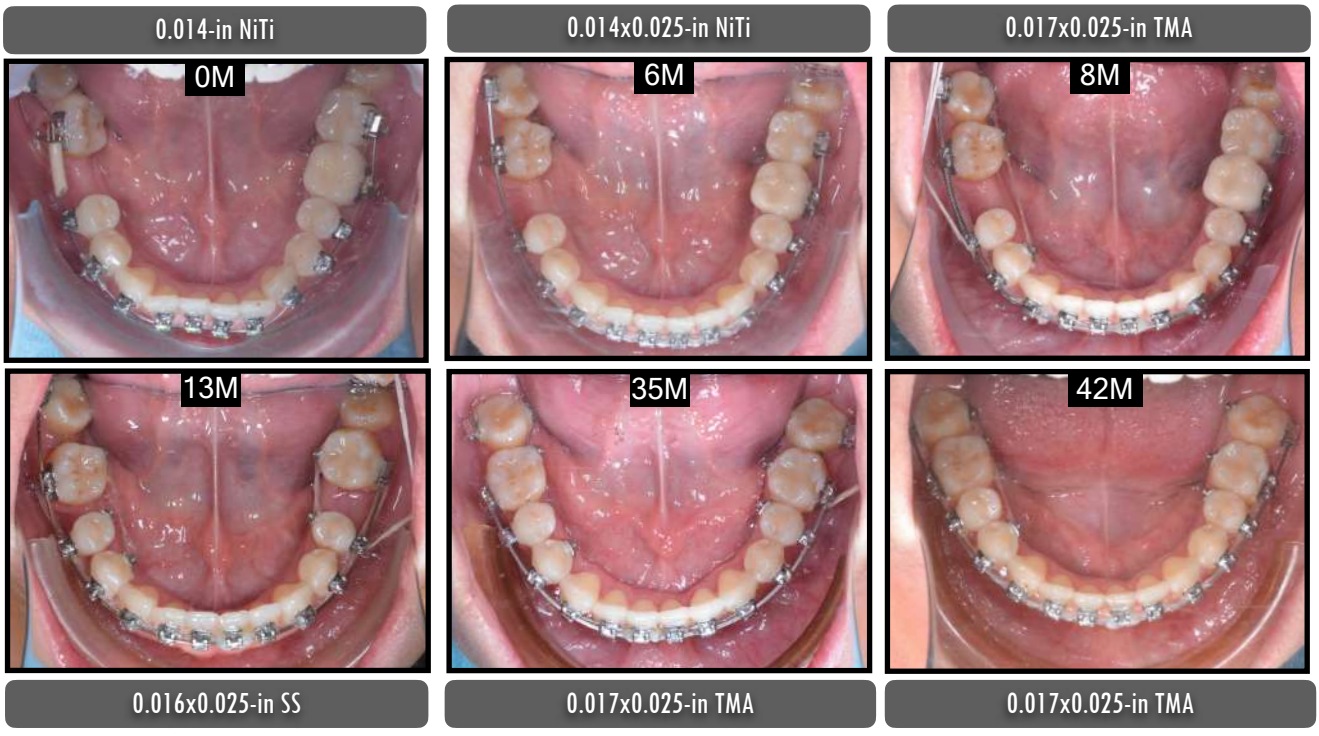

Fig. 10:
Treatment progression from the mandibular occlusal view in months (M) with arch wire specification is shown from the start of treatment (0M) to forty-two months (42M).

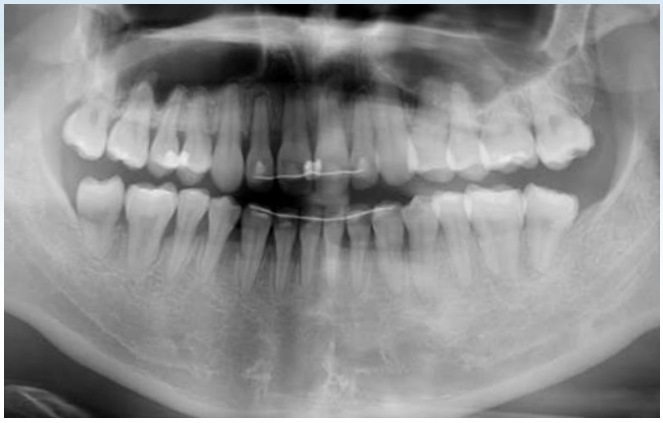

Fig. 11: *Posttreatment panoramic radiograph*

Fig. 12: *Posttreatment cephalometric radiograph*

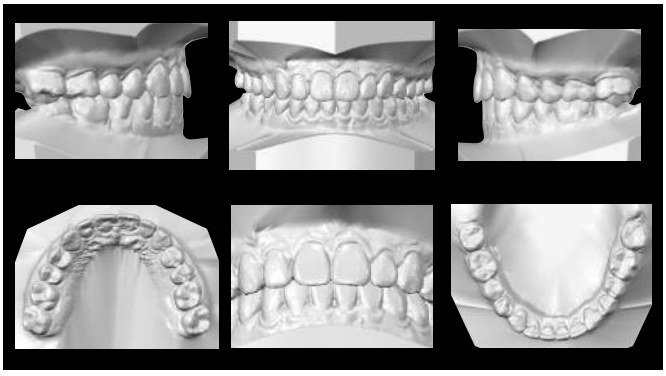

Fig. 13: *Posttreatment dental models (intra-oral scans)*

- Vertical: *intrusion of the incisors*
- Inter-Molar Width: *increased (LR buccal tipping)*

Facial Esthetics:

- The harmonious facial profile was maintained.

Final Evaluation of Treatment

Clinical examination revealed that the retraction and intrusion of upper and lower incisors resolved the deep bite. The whole upper arch distalizaton and mesial bodily movement of the lower molars by power chains closed the bilateral lower first molar space symmetrically. The buccal crossbite was also corrected. Both lips were retracted relative to the E-line as the upper dentition was retracted. Dental alignment and esthetics were near-ideal.

The only significant discrepancies were buccolingual inclination of UR7 and UL7, and their occlusal contacts with LR8 and LL8 respectively. One-year follow-up evaluation documented the stability of the final occlusion (Fig. 16). Neither relapse of the deep bite nor buccal crossbite were noted.

Discussions

Torque control of maxillary incisors

Literature has shown that success of overbite correction is associated with reduction of inter-incisal angle[6] and excessive overlap of maxillary incisors with the lower lip.[14] In this case, high-torque brackets were utilized on the upper central incisors to increase inclination, counteracting the retroclination side effect during maxillary whole-

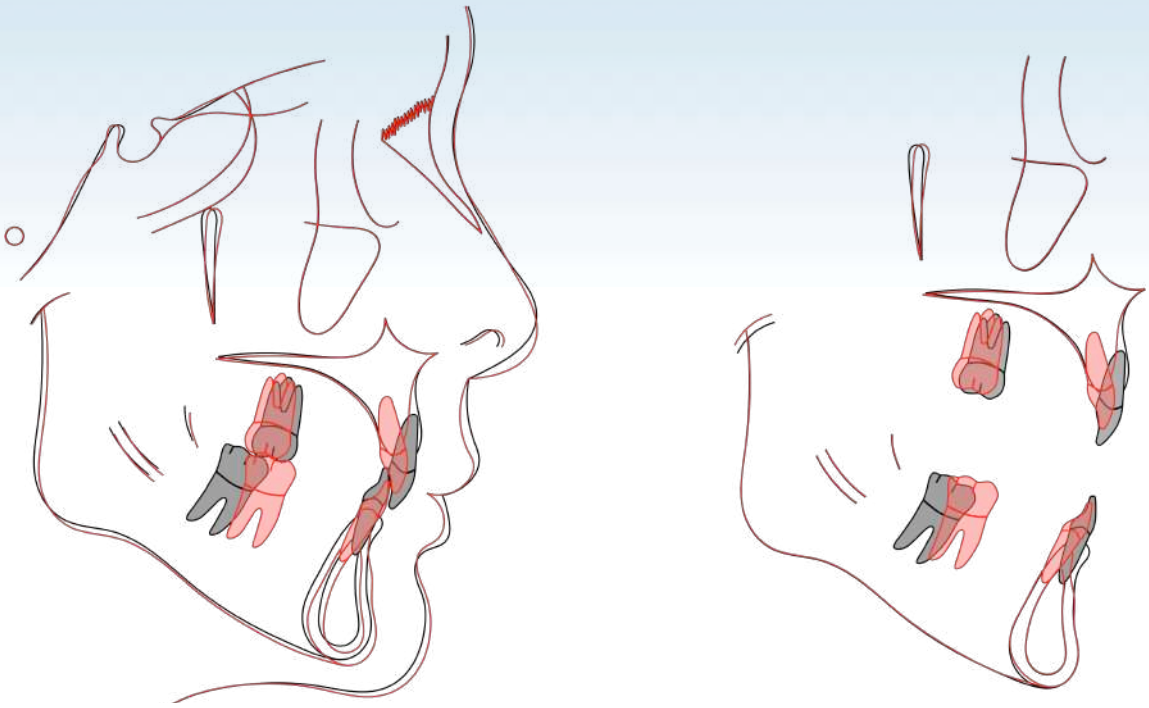

Fig. 14:
Superimposition of the pre-treatment (black) and posttreatment (red) cephalometric tracings shows the dentofacial effects of treatment.

arch distalization and Class II elastic wear. Additionally, ART spring, pre-torqued archwire, and anchorage from an incisal miniscrew were utilized to maintain the inclination of upper anterior segment because the force from the power chain was occlusal to the center of resistance of the incisors.

Anchorage by TSAD: maxillary whole-arch distalization and incisor intrusion

TSAD-based interventions are proven to be more effective in maxillary whole-arch distalization, with fewer unwanted side effects compared to conventional mechanics such as the Pendulum appliance.[12] Extra-radicular miniscrews are often used for skeletal anchorage due to their ease of placement and low demand for patient compliance.[2,3,5,15-17] Some authors report that buccally-placed interradicular microimplants can achieve up to 3.5 mm of distal movement without negative effects.[10,18] However, the limitation of distalization when using interadicular miniscrews is determined by the distance between adjacent roots. To maximize the amount of distalization in the current case, extra-alveolar bone screws were utilized. Studies have shown that bilateral extra-alveolar infrazygomatic crest (IZC) bone screws were effective for retracting the entire maxillary arch.[8,19,20]

Mandible shift (A-P, Transverse)

Superimposition of the pretreatment and post-treatment cephalometric tracings (Fig. 14) reveals a forward displacement of mandible. This change might be reversal of the restriction of mandible protrusion due to retroclination of upper incisors

Fig. 15: *Posttreatment facial and intraoral photographs*

and severe overbite in the initial occlusion. After the proclination of upper incisors and reduction of overbite, the mandible was unlocked and shifted right and to a relatively forward position. Studies showed that one-fourth to one-third of Class II division 2 malocclusion patients displayed a functional posterior displacement[21,22] and the correction of overbite may unlock the occlusion, which modified the path of mandible closure and subsequently improved the Class II molar relationship.[23,24]

From the pre-treatment frontal view (Fig. 2), a functional shift was noted; therefore crossbite elastics were applied to correct the occlusal interference caused by the right buccal crossbite, which is reported to be an effective approach in patients with unilateral crossbite.[25,26] The improved alignment of the facial and dental midlines was stable, as shown in the posttreatment (Fig. 15) and 1-year follow-up records (Fig. 16).

Lower anterior intrusion (bite turbos)

To correct the overbite and overjet, anterior bite turbos were used to reduce the overbite and procline the mandibular incisors to improve the overjet. L-shaped Class II elastics were utilized to reduce the overjet, and low-torque brackets were

Fig. 16: *Facial and intraoral photographs at 1-year post-treatment document the current condition of the patient.*

bonded on lower incisors to prevent over proclination. Anterior bite turbos are an effective tool for correcting anterior deep bite.[2,27,28] The L1-MP angle was corrected to a more ideal value (L1-MP, 92°).

Bilateral first molar extraction and space closure

Some endodontically treated teeth can become uncomfortable after orthodontic tooth movement.[13] LL6 was extracted due to progressive discomfort and poor prognosis. Although Edward Angle called the first molar the "keystone" of the dental arch, a recent study shows that it is sometimes better to extract a compromised first molar instead of a healthy premolar.[29] Study has shown that tooth movement into a fresh extraction socket occurs more quickly and effectively because the extraction site stimulates increased osteoclastic activity and metabolic changes in the alveolar bone for up to four months, which accelerates orthodontic tooth movement.[30] The transseptal fiber between LL7 and LL8 can also facilitate mesial movement of LL8.[31] Given that LL6 was a fresh extraction socket and considering the anatomical limitation on the buccal side of LL8, there was insufficient space to bond a bracket. Therefore, LL7 was protracted using reciprocal forces from both the buccal and lingual sides without incorporating LL8, to

prevent unwanted side effects such as buccal sweeping or mesial rotation of the posterior teeth.

On the other hand, since LR6 had been absent for two years, the resulting atrophic edentulous ridge impeded the forward movement of LR7, with space partially closed due to mesial tipping of LR7. This space could be closed orthodontically or restored prosthetically. In order to close the LL6 extraction space and retract the lower anterior teeth without deviating the dental midline, the LR6 space was closed as well to achieve symmetry. Space closure can be difficult in atrophic sites[31] and may lead to bone loss, gingival recession, and root resorption in adults.[32] To prevent complications such as soft-tissue clefts and space reopening, light forces and extended intervals between activations are essential for proper tissue recovery.[31]

The most significant challenge was achieving minimal overjet without extractions in the maxillary arch, while closing the bilateral molar spaces in the mandible. Additional complicating factors were the patient's mandibular retrognathism and severe deep bite. Ideal mesial translation of the bilateral mandibular second molars was achieved, along with complete closure of the first molar spaces, and proclination plus intrusion of both upper and lower incisors. These challenging mechanics required a prolonged treatment time.

Conclusions

1. In adults, jaw growth modification treatment is complicated by mandibular retrognathism. Whole maxillary arch distalization can be achieved with anchorage from extra-alveolar miniscrews. An incisor miniscrew should be considered to prevent occlusal plane dumping (a deepened curve of Spee).

2. Extraction may be considered for an endodontically-treated molar if the prognosis is unfavorable for long-term stability.

3. After improving alignment of the upper incisors and the correction of the buccal crossbite on the right side, the mandible shifted forward and to the right. TMJ dysfunction improved as the dental interferences were removed.

4. The incisor miniscrew was an effective tool for achieving palatal root torque of the upper incisors.

5. This case demonstrated that Class II division 2 malocclusion with severe deep bite and unilateral scissors bite can be successfully treated using a combination of ART springs, extra-alveolar miniscrews on the IZC, interradicular incisor miniscrew, and anterior bite turbos.

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Discrepancy Index Worksheet

TOTAL D.I. SCORE 11

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 = 0

OVERBITE

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

Total = 5

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 = 1

OCCLUSION

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

Total = 0

LINGUAL POSTERIOR X-BITE

1 pt. per tooth Total = 0

BUCCAL POSTERIOR X-BITE

2 pts. Per tooth Total = 2

CEPHALOMETRICS (See Instructions)

ANB ≥ 6° or ≤ -2° = 4 pts.

Each degree < -2° _____ x 1 pt. = _____

Each degree > 6° _____ x 1 pt. = _____

SN-MP

≥ 38° = 2 pts.

Each degree > 38° _____ x 2 pts. = _____

≤ 26° = 1 pt.

Each degree < 26° _____ x 1 pt. = _____

1 to MP ≥ 99° = 1 pt.

Each degree > 99° _____ x 1 pt. = _____

Total = 0

OTHER (See Instructions)

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

Identify: Difficulty in closing LR6 space.

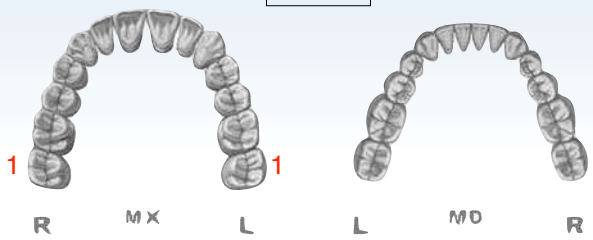
Total = 3

Cast-Radiograph Evaluation

Total Score: 15

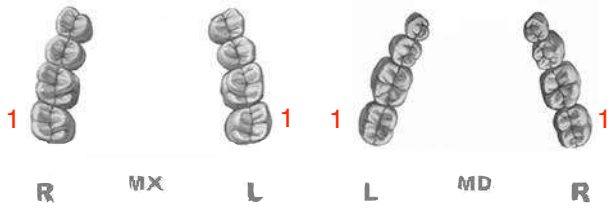
Alignment/Rotations

2



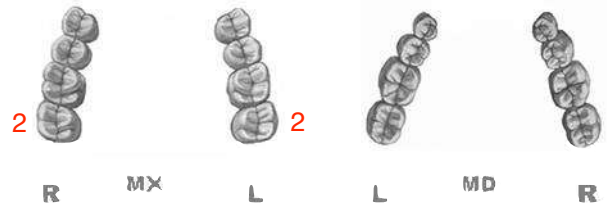
Marginal Ridges

4



Buccolingual Inclination

4

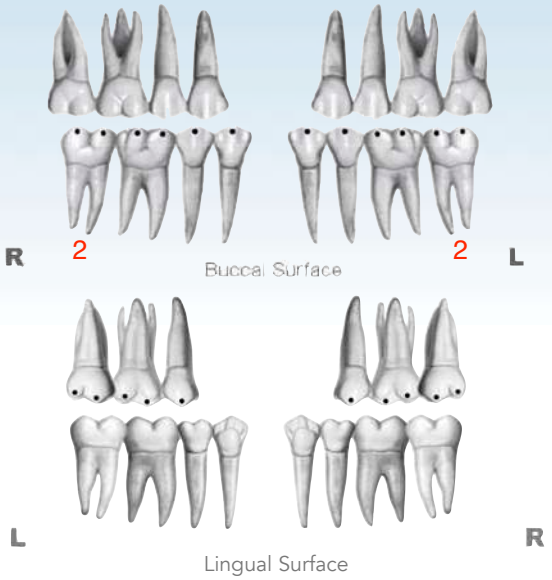


Overjet

0

Occlusal Contacts

4

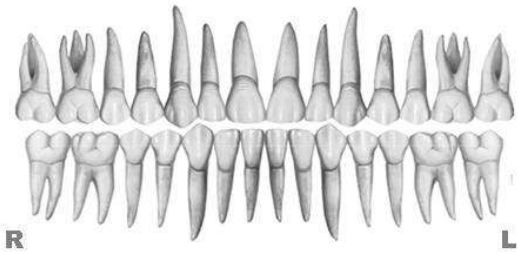


Occlusal Relationships

0

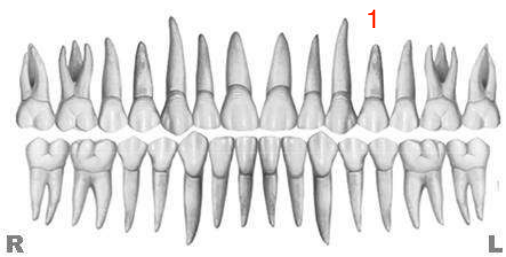
Interproximal Contacts

0



Root Angulation

1

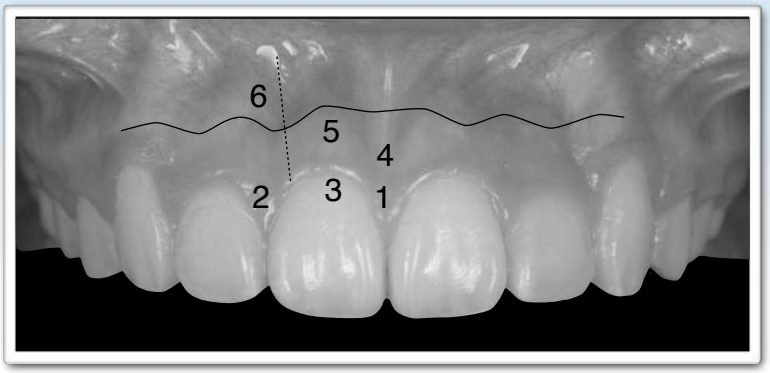


INSTRUCTIONS: Place score beside each deficient tooth and enter total score for each parameter in the white box. Mark extracted teeth with "X". Second molars should be in occlusion.

IBOI Pink & White Esthetic Score

Total Score = 1

1. Pink Esthetic Score

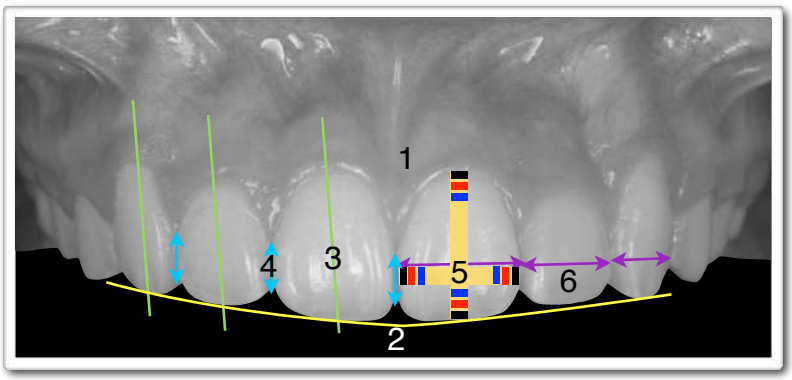


Total = 0

1. M & 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 & 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 = 1

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

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