

光聚機挑選指南



Part 1 - 能量

Q：能量越強越好？！

高強度能量優缺點

優點

短時間快速聚合樹脂

缺點

- 機身容易發燙
- 高熱導致牙髓損傷
- 過熱當機

理想的光聚機

能量

每秒光能量1100-1130mW/cm²變換

散熱

良好散熱系統，持續輸出不發燙

黏著

連續 Curing Case 全口矯正器黏著
或 Veneer Cementation 也不過熱

Part 2 - 波長

Q：全波長 vs 純藍光
LED光聚機差別

全波長光聚機優缺點

優點

適用包含非CQ-based 的 Resin Composite

缺點

- 市面上85%以上樹脂仍以CQ-based為主
- 紫光波長能量不足，須增加照射時間
- 紫光波長能量不足，須配合輔助工具
- 價格昂貴

理想的光聚機

能量

460-480nm的波長配合超過
1200mW/cm²的能量

C/P 值

具有良好的品質以及性價比

“ 您知道嗎？ ”

近年來光聚機所搭配使用的電池以鋰電池為主，不會有記憶效應的問題。因此 使用完畢後就放回基座上充電，除了不會造成電池壽命減少外，也可以讓光聚機穩定在基座上避免摔到。

Part 3 - 電池

Q：續電力越久越好？？

高續電力光聚機

優點 可連續使用3-5天不用充電

缺點 搭配高電容量的光聚機會使整體重量上升，操作不方便

理想的光聚機

電池 至少1個工作天使用不充電的蓄電量

重量 良好散熱系統，持續輸出不發燙
越輕巧＋方便使用



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Treatment of a Class I Bimaxillary Protrusion, Crowding, and Black Triangles

Abstract

Introduction: A 24-year-old female presented with chief complaints of flared upper central incisors and blocked-in right upper lateral incisors with protrusive lips.

Diagnosis: The cephalometric analysis revealed a skeletal Class I relationship (SNA, 89°; SNB, 83°; ANB, 6°) and proclined upper and lower incisors. An intraoral assessment revealed partial crossbite of the upper right lateral incisor as well as blocked-out eruption of the upper left second premolar, and the midline was deviated 1mm to the right. There was crowding in both the upper and lower anterior dentitions. The Discrepancy Index (DI) was 38.

Treatment: A Damon® system appliance with passive self-ligating brackets was applied to correct the dental malocclusion after extracting four premolars (UR4, UL5, LR4, and LL4). Asymmetric extraction was carried out due to the upper left second premolar being intruded with a curved root. Space closure and midline correction were accomplished with elastics. The active treatment time was 31 months.

Results: Improved dentofacial esthetics and occlusal function were achieved after treatment. The Cast-Radiograph Evaluation (CRE) score was 24, and the Pink and White esthetic score was 3. Neither significant root resorption nor periodontal problems were noted.

Conclusions: This case report demonstrates the use of passive self-ligating appliances to resolve severe anteriorly proclined teeth without using an orthodontic bone screw. (*J Digital Orthod* 2022;68:26-41)

Key words:

Skeletal Class I, proclined anterior teeth, anterior crossbite, midline deviation, passive self-ligating brackets, asymmetrical mechanics

The dental nomenclature for this case report is a modified Palmer notation with four oral 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, e.g., an upper right lateral incisor is UR2.

Introduction

Bimaxillary protrusion is commonly seen in Asian populations.¹⁻³ It is characterized by protrusive and proclined anterior teeth, which results in lip protrusion and increased facial convexity.⁴ Facial esthetics is the main reason that patients seek orthodontic treatment. The etiology of a bimaxillary

protrusion is multifactorial and consists of both genetic and environmental factors such as mouth breathing, tongue and lip habits, and tongue volume.⁵ Conventional treatment includes extraction of four first premolars, followed by retraction and retroclination of the anterior teeth to reduce facial convexity and to maintain or achieve Class I canine and molar relationships.^{6,7}

This case report demonstrates the treatment of a patient with bimaxillary protrusion in a Class I molar relationship by extracting four premolars. Reducing the dental and soft tissue convexity resulted in a satisfying outcome.

Yi-Hsuan Lin,*Training Resident, Beethoven Orthodontic Center (Left)***Joshua S. Lin,***Associate 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)*

Diagnosis and Etiology

A 24-year-old female presented for orthodontic evaluation for misaligned teeth with a large overjet

and protrusive, incompetent lips (Figs. 1-3). Medical and dental histories were non-contributory. From the cephalometric analysis, a convex profile with protrusive upper and lower lips to the E-line were



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

noted (Fig. 4; Table 1). Compared to the facial midline, the upper and lower dental midlines were coincident but were shifted 1mm to the right. The panoramic radiograph revealed an impacted LR8 and a super-erupted UL8. The blocked-out UL5 was a mesio-angular partial impaction with a curved root (Fig. 5). Temporomandibular joint (TMJ) morphology was normal in the open and closed positions (Fig. 6). There were no signs nor symptoms of temporomandibular dysfunction (TMD). The American Board of Orthodontics (ABO) Discrepancy Index (DI) was 38 points, as shown in Worksheet 1 at the end of this report.⁸

Treatment Objectives

1. Improve esthetics by correcting facial convexity, and retracting the lips relative to the E-line (Table 1).
2. Correct the anterior blocked-in UR2 to achieve an ideal overjet.
3. Maintain Class I canine and molar relationships.
4. Correct the midline discrepancy.



■ **Fig. 2:**
A close-up shot of the proclined upper anterior teeth and the large overjet

Treatment Plan

According to Chang's extraction decision chart (Table 2), extraction is the first choice for a case with flared central incisors and protruded lips.



■ **Fig. 3:** Pre-treatment dental models (casts)



■ **Fig. 4:** Pre-treatment cephalometric radiograph

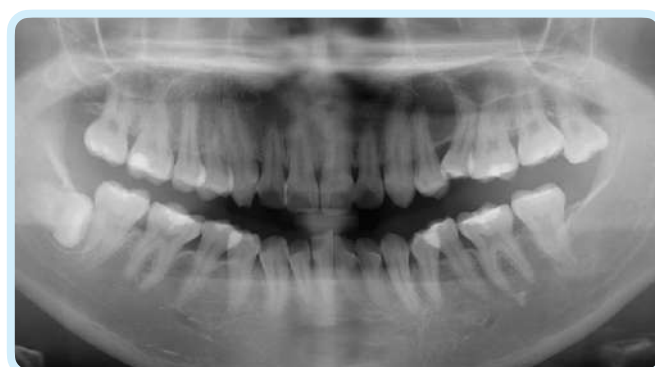
Since the patient was open to extraction, UR4, UL5, LR4, and LL4 were extracted in order to relieve the anterior crowding and flaring. An asymmetric extraction pattern - UL5 instead of UL4 - was carried out because UL5 was compromised with a curved root and partial impaction. Space closure by retracting the upper and lower arches would also retract the lips. Class II elastics were indicated to resolve the anterior-posterior relation between the upper and lower dentitions. Bilateral infrazygomatic crest (IZC) bone screws are an option to achieve further overjet correction. Both fixed and clear retainers were prescribed for retention of the arches after active treatment. Extraction of UL8 and LR8 was also suggested.

Treatment Progress

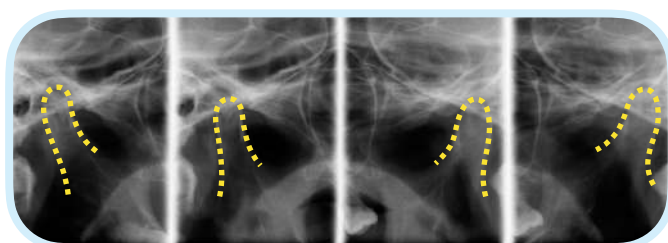
A 0.022-in slot Damon Q® fixed appliance (Ormco, Glendora, California) with passive self-ligating (PSL) brackets was selected along with all specified archwires and orthodontic auxiliaries. Before active orthodontic treatment, the patient was referred to extract the UR4, UL5, LR4, and LL4. 2 weeks later, Damon Q® 0.022-in PSL brackets (Ormco, Glendora, CA) were bonded on the upper and lower teeth, and a 0.014-in CuNiTi archwire was engaged. Standard-torque brackets were chosen for both upper and lower anterior teeth. In preparation for restorative treatment of LR6 mesial surface, an open coil spring was placed between LR5 and LR6 to create space.

CEPHALOMETRIC SUMMARY			
	PRE-TX	POST-TX	DIFF.
SKELETAL ANALYSIS			
SNA° (82°)	89°	87°	2°
SNB° (80°)	83°	82°	1°
ANB° (2°)	6°	5°	1°
SN-MP° (32°)	35°	35°	0°
FMA° (25°)	28°	28°	0°
DENTAL ANALYSIS			
U1 TO NA mm (4mm)	7.5	0	7.5
U1 TO SN° (104°)	121°	94°	27°
L1 TO NB mm (4mm)	10	6	4
L1 TO MP° (90°)	103°	93°	10°
FACIAL ANALYSIS			
E-LINE UL (-1mm)	5	1	4
E-LINE LL (0mm)	8	2	6
%FH: Na-ANS-Gn (53%)	57%	57%	0%
Convexity:G-Sn-Pg' (13°)	7°	6°	1°

■ Table 1: Cephalometric summary



■ Fig. 5: Pre-treatment panoramic radiograph



■ Fig. 6 :

Transcranial radiographs of the temporomandibular joints (TMJs) prior to treatment are shown from the left: right TMJ closed, right TMJ open, left TMJ open, and left TMJ closed. The mandibular condyles are outlined in yellow.

After two months of space opening, the lower archwire was removed, and resin filling to restore LR6 mesial caries was carried out.

Early alignment of the upper and lower arches was achieved with progressive 0.014x0.025-in CuNiTi and 0.017x0.025-in TMA archwires. A four-ring power chain was placed bilaterally from the maxillary

canines to the maxillary 1st molars to close the extraction spaces in the 10th month of treatment. Class II elastics (Fox, 1/4-in, 3.5-oz; Ormco) were applied on both sides to accelerate the correction of the excessive overjet. They were bilaterally attached from U3 drop-in hooks to L6 hooks.

In the 14th month of treatment, brackets on UR3 to UL3 were repositioned to correct the axial angulations. In the 15th month, black triangles were noted interproximally between the four upper incisors and between the four lower incisors. After interproximal enamel reduction (IPR) was performed, an elastomeric chain was applied to close the space (Fig. 7). In the 17th month, a more rigid 0.016x0.025-in SS archwire was used for final space closure. Figure-eight ties were applied on both arches from canine to canine in order to fix the anterior teeth as segments. An additional 14 months were required to detail the occlusion.

	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...		

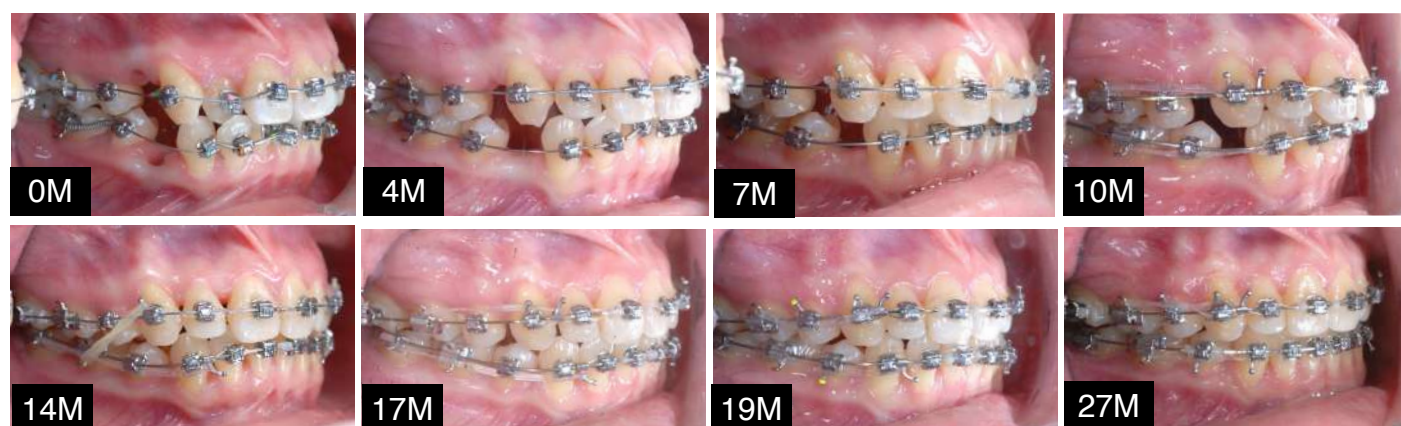
Table 2: Chang's Extraction Decision Table



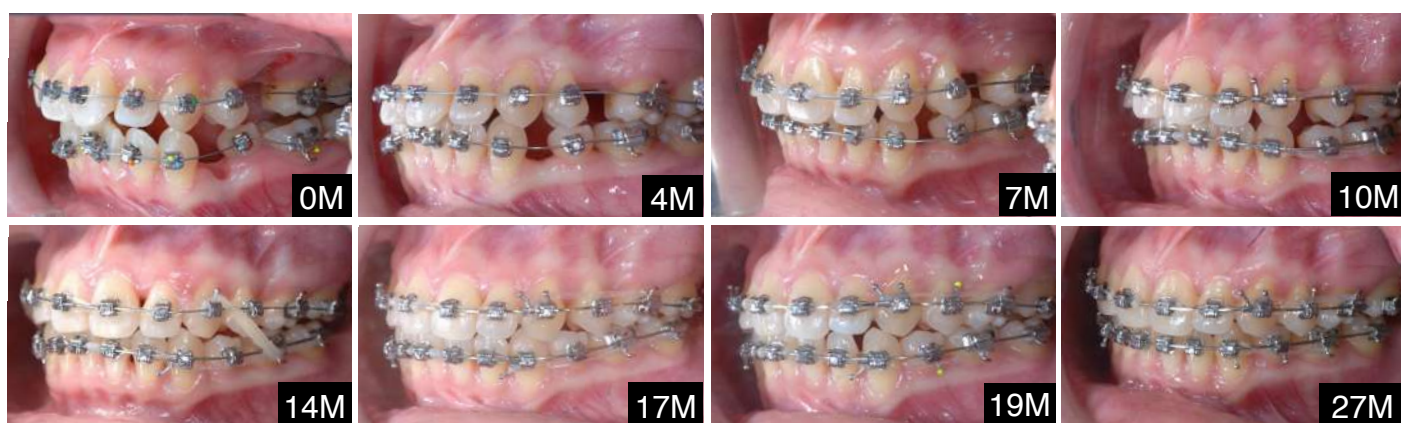
Fig. 7: Black triangles were noted between upper and lower incisors (left column). IPR was performed to reshape tooth morphology (center column). Anterior teeth were tied with elastomeric thread for space closure. Final results show that black interdenal spaces were eliminated and contact areas were increased (right column).



■ Fig. 8: Treatment sequence from the frontal view is shown in months (M): 0M, 4M, 7M, 10M, 14M, 17M, 19M, and 27M.



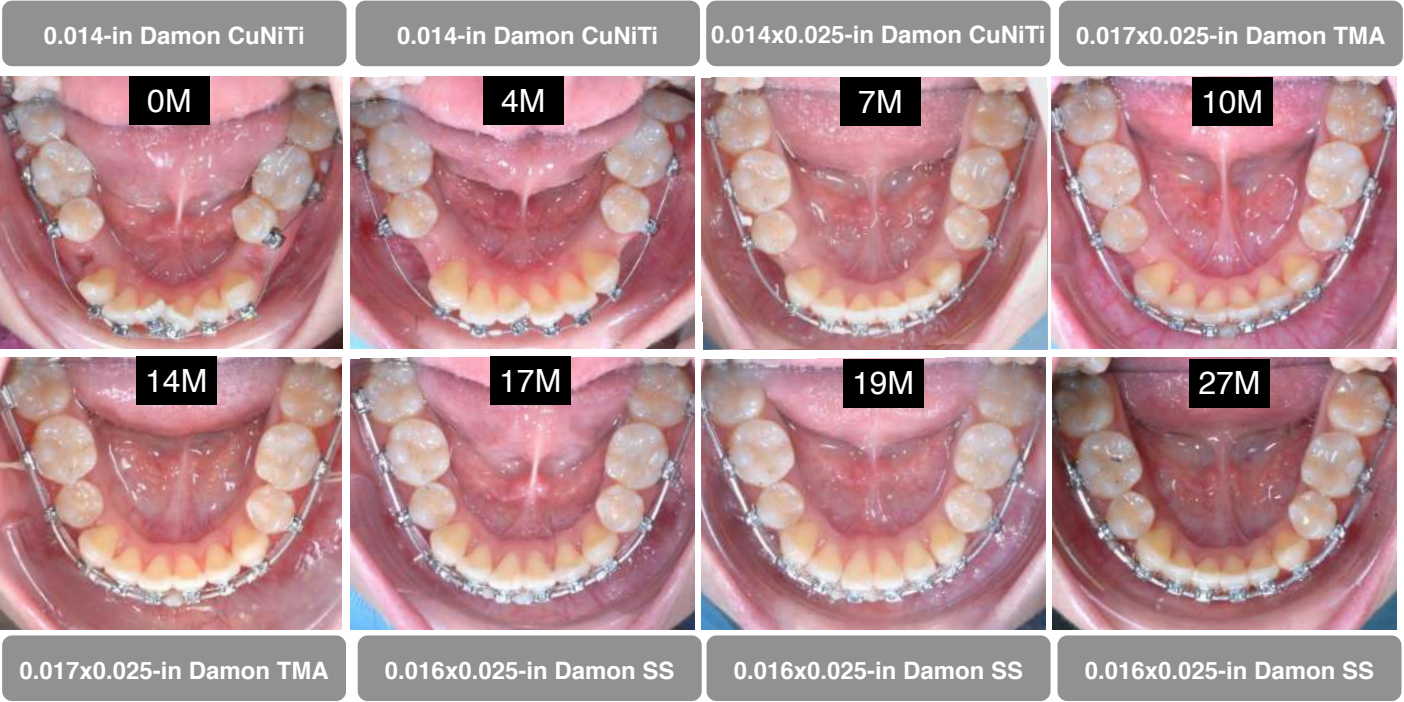
■ Fig. 9: Treatment sequence from the right buccal view is shown in months (M): 0M, 4M, 7M, 10M, 14M, 17M, 19M, and 27M.



■ Fig. 10: Treatment sequence from the left buccal view is shown in months (M): 0M, 4M, 7M, 10M, 14M, 17M, 19M, and 27M.



■ Fig. 11: Treatment progress from the maxillary occlusal view is shown in months (M): 0M, 4M, 7M, 10M, 14M, 17M, 19M, and 27M.



■ Fig. 12: Treatment progress from the mandibular occlusal view is shown in months (M): 0M, 4M, 7M, 10M, 14M, 17M, 19M, and 27M.

The treatment progress is documented in a progressive series of intraoral photographs in frontal (Fig. 8), right buccal (Fig. 9), left buccal (Fig. 10), maxillary occlusal (Fig. 11), and mandibular occlusal (Fig. 12) views. After 31 months of active treatment, all fixed appliances were removed, and fixed retainers were delivered on the maxillary anterior 2-2 and the lingual mandibular 3-3, respectively. Removable clear overlay retainers were provided to maintain both arches. Posttreatment records were

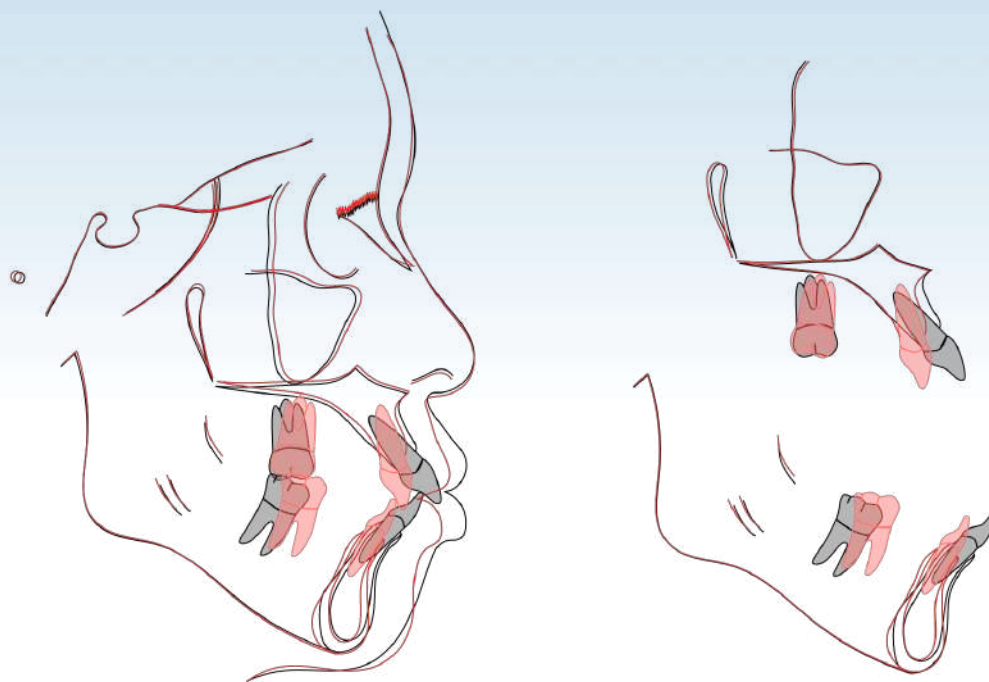
collected: casts, photographs, as well as panoramic and lateral cephalometric radiographs (Figs. 13-17).

Results Achieved

Facial esthetics and intermaxillary occlusion were both significantly improved after 31 months of active treatment (Fig. 13). The canine and molar relationships were maintained in Class I. The posttreatment panoramic radiograph documented acceptable root parallelism (Fig. 16). The superimposed



■ Fig. 13: Posttreatment facial and intraoral photographs



■ Fig. 14:

Pre-treatment (black) and posttreatment (red) cephalometric tracings are superimposed on the anterior cranial base (left), the maxilla (upper right), and the mandible (lower right). The incisors were retracted, and the protrusion was reduced.



■ Fig. 15: Posttreatment cephalometric radiograph



■ Fig. 16: Posttreatment panoramic radiograph

cephalometric tracings illustrated that the LR6 and LL6 were protracted 5mm due to the closing of the extraction spaces using elastic force (Fig. 14). The axial inclination of the upper incisor (U1-SN) decreased 27° after treatment (121° to 94°), and the axial inclination of the lower incisors (L1-MP) was tipped lingually (103° to 93°). 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).



■ **Fig. 17:** Posttreatment dental models (casts)

The Cast-Radiograph Evaluation (CRE) score was 24 points, as shown in the supplementary Worksheet 2.⁹ The Pink and White dental esthetic score was 3 points (Worksheet 3).¹⁰ The patient was pleased with the final result.

Discussion

In Taiwan, many young females are averse to having a convex profile with protrusive lips and seek orthodontic treatment to solve the problem and acquire a more esthetically pleasing straight profile. The major problem for this present patient was crowded anterior teeth, which were extremely proclined with a large overjet. According to Chang's extraction decision table (Table 2), extraction of 4 premolars for crowding relief and anterior teeth retraction was planned to achieve optimal esthetic and functional result. During the course of treatment, Class II elastics were applied to help to retract the upper anterior teeth and improve the inter-arch relationship. The final outcome shows that although mild anchorage loss was noted in the lower dentition, the originally protrusive anterior teeth were successfully retracted. The patient was very pleased with the improvement in her facial profile. It

was not necessary to use extra alveolar bone screws, which was the patient's preference. In retrospect, two bone screws in bilateral infra-zygomatic crests would have expedited the treatment, enhanced the anterior teeth reaction, and could have maintained better torque for the anterior teeth. It would have been wise to prospectively propose the use of bone screws; patients tend to be less receptive to this option if they were neither informed nor expecting it.

Consideration About Treating Black Triangles

In the finishing stage of treatment, black triangles were noted both in the upper and lower anterior dentition. Although a study showed the threshold for patient awareness and adversity to black triangles is 3mm,¹¹ the majority of space closure treatments averages between 1 to 1.5mm.^{12,13}

A black triangle is the open gingival embrasure area lacking interdental papillae. It can be seen when papilla deficiency is significant enough that saliva can no longer mask the dark contrast against the white tooth. The space may make the patient feel odd and unattractive, and furthermore may cause loss of periodontal health due to chronic retention of food debris and subsequent gingival inflammation.¹⁴

Burke¹⁵ reported a 41% prevalence of black triangles in adolescent orthodontic patients with previously crowded maxillary central incisors. The occurrence is greater in adult patients, and may be as high as 67%, which is attributed to the resorption of the alveolar crest. Since the adult population is now up to 40% of all orthodontic patients, the predisposition for posttreatment black triangles should not be ignored.¹⁶

Black triangles have many etiologies: age, thin gingival biotype, decreased bone height from

periodontal diseases, excessive embrasure space with deficient papilla affected by root angulation, crown form, and distance from alveolar bone to interproximal contact.¹³

Conventional solutions for black triangles include periodontal regenerative surgery, prosthetic reconstruction, and tooth morphology reshaping combined with orthodontic alignment.^{17,18}

Periodontal regenerative surgery

Regenerative periodontal surgery focuses on the pink esthetic portion that includes interproximal bone grafts and soft-tissue grafts for papilla reconstruction. Surgical treatments are more invasive and the outcome is less predictable.

Prosthetic reconstruction

Many patients may prefer non-invasive dental recontouring to reduce or obliterate black triangles with tooth-colored restorations. Prosthetic restorations include porcelain crowns, veneers, or composite bonding to fill the spaces and improve the white esthetic portion. However, some patients are unwilling to sacrifice sound tooth structure for porcelain restoration and are also reluctant to pay the extra prosthesis fee. Moreover, even with highly polished procedures, discoloration may appear on the composite surfaces several years after treatment. If restorative procedures are carried out, care must be taken not to “overcontour” the teeth, create harboring places for plaque, strangulate the papilla, and create an environment conducive to inflammation.¹⁵

Morphology reshaping combined with orthodontic alignment

During orthodontic treatment, black triangles can be reduced by reshaping the tooth outline form, polishing the enamel surface, and using elastomeric chains to move adjacent teeth to close the space. The open embrasure area becomes smaller and the papilla fill the narrowed embrasure to eliminate the black triangles. Factors including root angulation, crown form, and interproximal contact location relative to its length should all be taken into consideration when planning the treatment.

(1) Root angulation

Root angulation is strongly associated with open gingival embrasure in adult orthodontic patients. Mean root angulation in normal gingival embrasures converges at 3.65°. An 1° increase in root divergence increases the odds of an open gingival embrasure by 14 to 21%. When adjacent roots come too close together, a lack of embrasure space can jeopardize the proximal bone and displace the papilla. Orthodontic brackets should be placed according to root angulation and soft tissue margin, but not to existing incisal edge to avoid aberrant root position.¹⁶

(2) Tooth crown form

Taylor¹⁹ classified tooth form into 3 types: square, tapered, and ovoid. Turverson²⁰ reported that tapered teeth with divergent crowns exhibit contact points rather than contact areas, which increases the embrasure area and contributes to open gingival embrasure. For each millimeter increase from the mesial contact to the long axis, the odds of an open gingival embrasure increases six times.¹⁶



■ **Fig. 18:**

Posttreatment photo (left) shows a smaller black triangle between LL1 and LL2. Photos from the 6-month (6M; center) and 5-year (5Y; right) follow-up show that the black triangle was diminished.

(3) Bone-contact distance and contact length

Tarnow et al.²¹ showed that an increased distance from the alveolar bone crest to the interproximal contact significantly increases the possibility of open gingival embrasures from only 2% for 5mm distance, 44% for 6mm, up to 73% for 7mm. The papilla has limited ability to creep from the alveolar bone crest to the interproximal contact. The contact position could be changed from the contact point to the contact area by tooth morphology reshaping. Increased contact length and shortened bone-contact distance could reduce the possibility of black triangles. Sarver²² explained the appropriate ratio for a contact between the central incisors is 50% of the tooth height.

(4) Tooth dimensions

Appropriate crown width-to-height ratio ($80 \pm 5\%$) for individual teeth and Bolton's ratio for interarch relationships should be considered before enamel stripping.¹³

Integrating this Knowledge into the Present Case

Black triangles are very common after crowding relief. The tapered upper and lower incisors were

stripped to attain a straight proximal outline form. The new contacts changed from short contact points to long contact areas. This reduced the embrasure area space and shortened the distance between the contact and the alveolar bone crest. For the present patient, although there was still a small black triangle noted between LR1 and LR2 when all active treatment was completed, it appeared smaller at the 6-month follow-up, and was further diminished at the 5-year follow-up (Fig. 18). This might be the result of gingival creeping, owing to tooth morphology reshaping for a better contact position and length, hence decreasing the bone-contact distance to an optimal range.

Conclusions

This bimaxillary protrusion with proclined anterior teeth, large overjet and protrusive lips was treated to an acceptable result. With Chang's extraction decision table (Table 2), 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, the long-term follow-up showed the black triangles were diminished and the occlusion was stable.

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Discrepancy Index Worksheet

TOTAL D.I. SCORE

38

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

=

3

OVERBITE

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

Total

=

2

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 _____ 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 $\geq 6^\circ$ 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.

= _____

1 to MP $\geq 99^\circ$

= 1 pt.

Each degree $> 99^\circ$ 14 _____ x 1 pt.

= 14

Total

=

19

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. = 2Midline discrepancy (≥ 3 mm) @ 2 pts. = _____Missing teeth (except 3rd 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

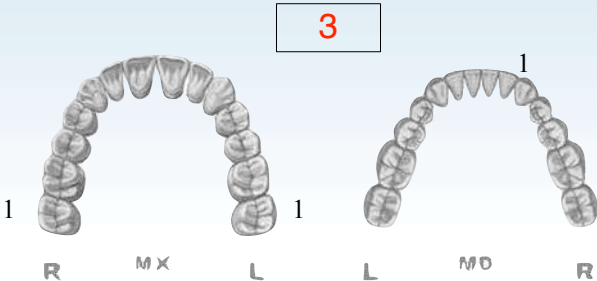
=

5

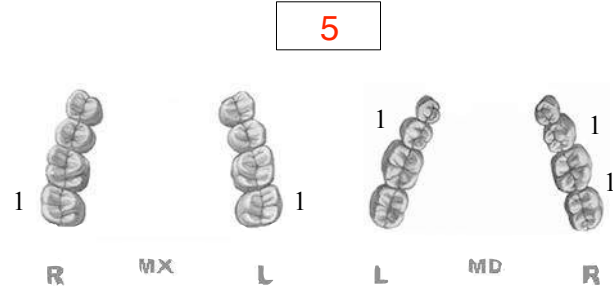
Cast-Radiograph Evaluation

Total Score: 24

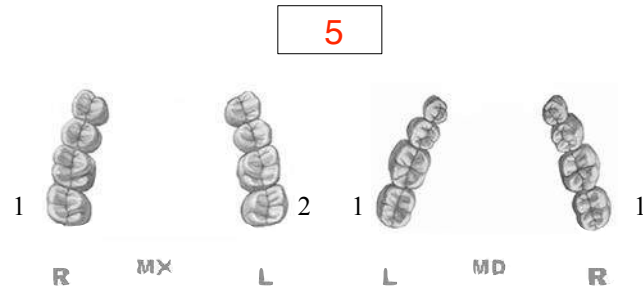
Alignment/Rotations



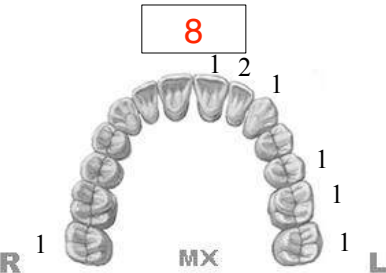
Marginal Ridges



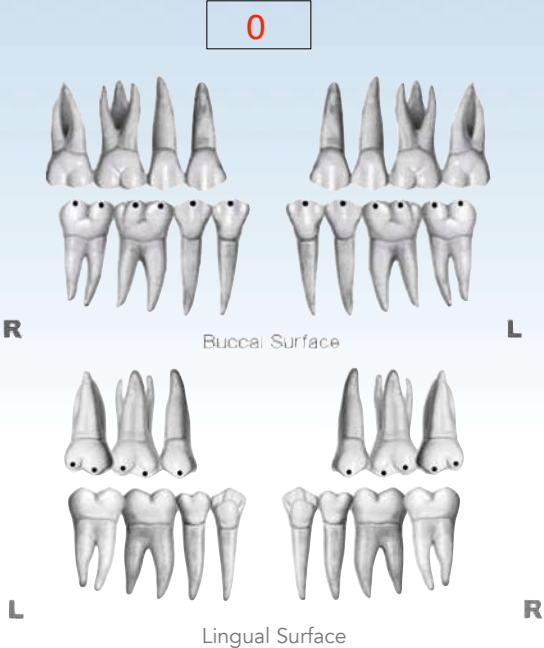
Buccolingual Inclination



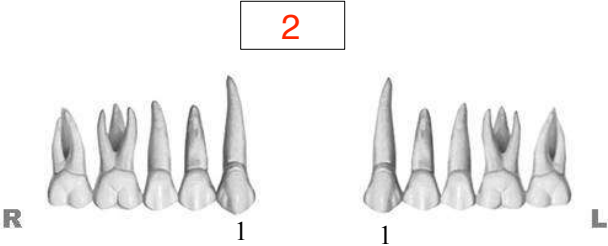
Overjet



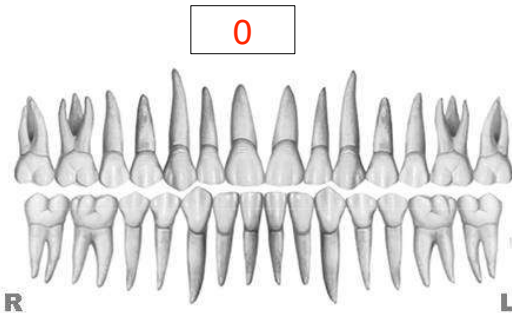
Occlusal Contacts



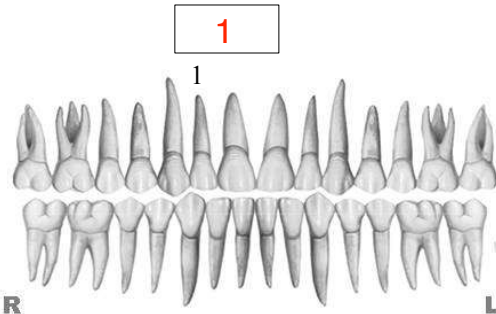
Occlusal Relationships



Interproximal Contacts



Root Angulation

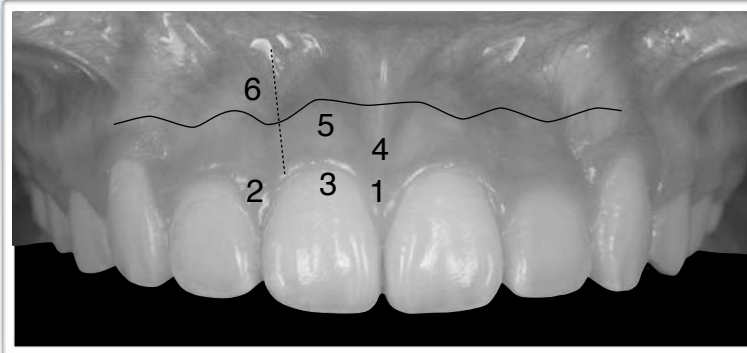


INSTRUCTIONS: Place score beside each deficient tooth and enter total score for each parameter in the white box. Mark extracted teeth with "X". Second molars should be in occlusion.

IBOI Pink & White Esthetic Score

Total Score = **3**

1. Pink Esthetic Score

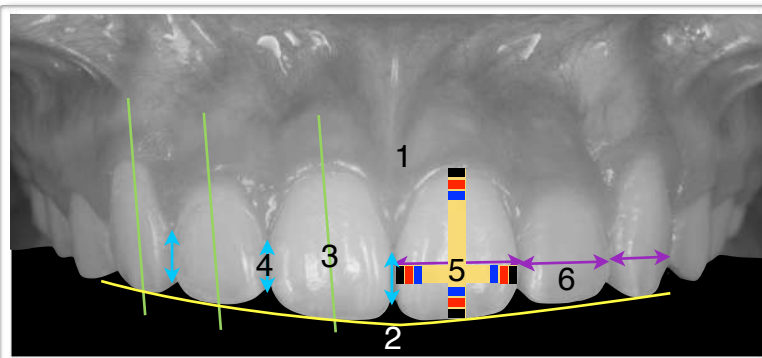


Total = **0**

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 = **3**

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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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



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



41 pts

Dr. Diego
Peydro Herrero



New Dr. 陳俊宏
Chun-Hung Chen



20 pts

Dr. 張銘珍
Ming-Jen Chang



18 pts

Dr. 曾令怡
Linda Tseng



16 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. 蘇釜璋
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



18 pts

Dr. 黃祈
Richie Huang



16 pts

Dr. 邱上珍
Grace Chiu



13 pts

Dr. 黃瓊嬋
Sabrina Huang



13 pts

Dr. 鄭惠文
Joy Cheng



13 pts

Dr. 曾淑萍
Shu-Ping Tseng



12 pts

Dr. 林曉鈴
Sheau-Ling Lin



10 pts

Dr. 張倩瑜
Charlene Chang



10 pts

Dr. 林佳宏
Alex Lin



10 pts

Dr. 林彥君
Lexie Lin



9 pts

Dr. 林森田
Chris Lin



7 pts

Dr. 黃登楷
Kevin Huang



6 pts

Dr. 張馨文
Sara Chang



6 pts

Dr. 李名振
Major Lee



6 pts

Dr. 陳惠華
Judy Chen



6 pts

Dr. 魏明偉
Ming-Wei Wei



6 pts

Dr. 黃荷薰
Ashley Huang



6 pts

Dr. 李彥峰
Yen-Feng Lee



6 pts

Dr. 張銘津
Ariel Chang



5 pts

Dr. 彭緯綸
Wei-Lun Peng



4 pts

Dr. 呂詩薇
Julie Lu



4 pts