Skeletal Class II Malocclusion with Convex Profile, Horizontal Impaction and Gummy Smile: Substituting Third for Second Molars

Abstract

***History**: A 25-year-old female sought orthodontic consultation to evaluate the poor esthetics of her maxillary anterior dentition.*

***Diagnosis**: The patient presented with a convex facial profile (24˚), increased lower facial height (58%), protrusive lips (4mm/5mm to the E-line), maxillary incisors extruded to the occlusal plane, deep bite (4mm), Class II occlusion (full cusp on the right, end-on on the left), and a maxillary dental midline shifted 3mm to the left. Upper incisor display was irregular, the smile arc was not visible, and there were unesthetic exostoses underlying the maxillary anterior gingiva. Cephalometrics revealed a protrusive maxilla (SNA 89˚), intermaxillary discrepancy (ANB 8˚), and a high mandibular plane angle (38˚). All 32 teeth were present, but the lower right third molar (LR8) was horizontally impacted, and two lower molars (LR7, LL6) had a history of endodontic treatment with extensive restorations. The American Board of Orthodontics (ABO) Discrepancy Index was 34.*

***Treatment**: Both maxillary second molars (UR7, UL7) and the compromised molars (LR7, LL6) were extracted, the LR8 was uprighted, and space was closed with power chains in all four quadrants. Class II elastics and bite turbos on the maxillary central incisors were applied to correct the intermaxillary relationship. Miniscrews were placed in each infrazygomatic crest (IZC) and between the upper central and lateral incisors. A surgical crown lengthening procedure was performed to enhance maxillary anterior esthetics.*

***Outcome**: With 38 months of active treatment, this difficult malocclusion (DI 34 points), was treated to a good result as evidenced by an ABO Cast-Radiograph Evaluation (CRE) score of 28 points and a Pink and White esthetic score of 5 points. Two-year follow-up evaluation documented the stability of the correction. (J Digital Orthod 2018;52:50-66)*

Key words:
Uprighting an impacted third molar, Class II malocclusion, self-ligating brackets, bite turbos, temporary anchorage devices, infrazygomatic crest (IZC), surgical crown lengthening

Dental nomenclature for this case report is a modified Palmer notation. The quadrants are upper right (*UR*), upper left (*UL*), lower right (*LR*) and lower left (*LL*). Relative to the midline, permanent teeth in each quadrant are numbered from 1 to 8. Third molars (*8s*) are the most frequently impacted teeth because they are the last to erupt, so there is often inadequate space particularly in the lower arch.[1] For most patients third molars erupt by about age 20, but even normal emergence may be delayed until the age of 25, particularly for L8s. The latter are often problematic because their developmental angulation proceeds from horizontal, to mesioangular, to a vertical (*upright*). The most common configuration associated with eruption failure occurs during the rotation from mesioangular to vertical. To avoid mesioangular or horizontal impaction, sufficient space is required mesial to the anterior border of the ramus to allow the L8 to rotate distally and erupt normally.[1]

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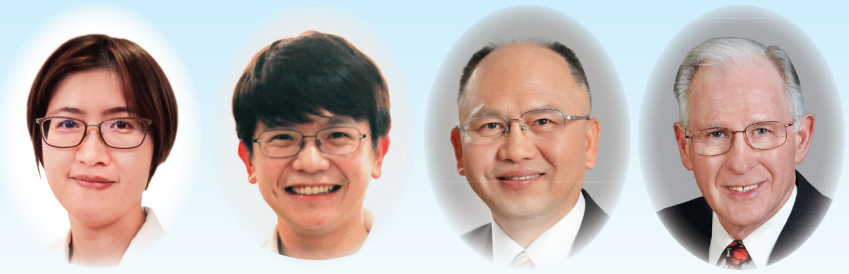

Extraction of third molars is often a dilemma, particular if there are missing or compromised teeth in the arch. Impacted third molars may be affected by a pericoronitis infection, pain, pathology such as dentigerous cysts, development of periodontal lesions on the distal surface of second molars, root resorption, caries in inaccessible areas, and TMJ-related symptoms.[2] Extracting third molars may result in complications such as post-operative pain, swelling, airway compromise, nerve damage, mandibular fracture, and life threatening infections.[2-5]

Fig. 1: Pre-treatment facial and intraoral photographs

Premolars are often extracted to correct Class II malocclusion. If third molars are present, extraction of second molars and substitution with third molars may be a viable option. Second molar extractions provide substantial space to resolve crowding and protrusion, but anchorage supplementation with TADs may be necessary. When molar substitution is well managed, third molars spontaneously erupt and provide excellent replacements for missing first or second molars.[6-8]

For the present case, four third molars, one of which was horizontally impacted, were successfully substituted for the adjacent second molars. Because of the patient's severe malocclusion, four maxillary miniscrews were required for anchorage to correct bimaxillary protrusion and crowding. The TADs also helped control the tendency for a gummy smile due to Class II elastics.

Etiology and Diagnosis

A 25-year-old female was dissatisfied with the alignment of her anterior dentition. Facial photographs showed symmetry in the frontal plane, a convex profile, bimaxillary protrusion, and an upper dental midline shift 3mm to the left (*Fig. 1*). There were no signs nor symptoms of temporomandibular joint (*TMJ*) dysfunction. The full smile was unesthetic due to an uneven incisor display, bulbous gingival contours, and a smile arc that was obstructed by the lower lip. Intraoral examination showed a Class II molar occlusion, full cusp on the right side, and end-on on the left. The LL8 had erupted into lingual crossbite. Slight crowding was found in the lower arch, but there was about a 6mm discrepancy in the upper arch. Overbite and overjet were 4mm (*Figs. 1 and 2*).

Panoramic radiography (*Fig. 3*) revealed horizontal impaction of the LR8. The LR7 and LL6 were compromised with endodontic treatment and extensive restorations. A lateral cephalometric radiograph (*Fig. 4*) and quantitative analysis (*Table 1*) showed a protrusive maxillary (*SNA 89°*) and severe intermaxillary discrepancy (*ANB 8°*). There was a high mandibular plane angle (*38°*), convex facial profile

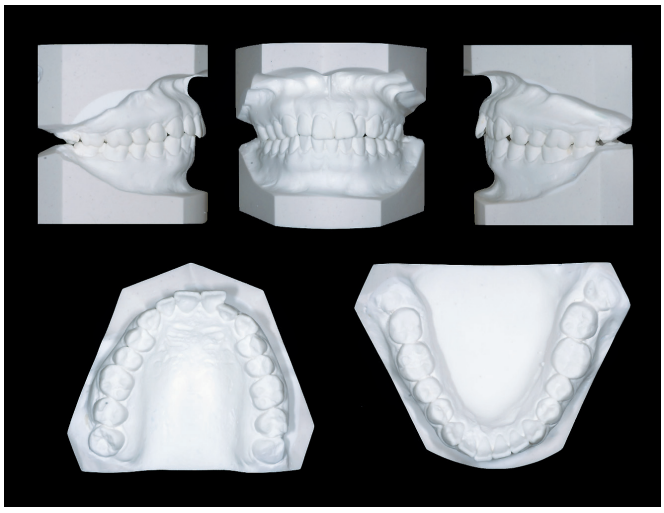

Fig. 2: Pre-treatment study models (casts)

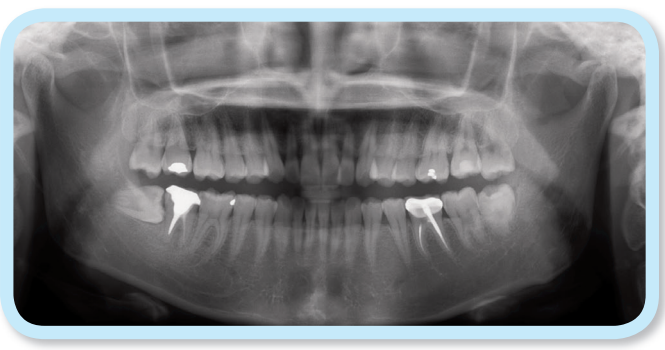

Fig. 3: Pre-treatment panoramic radiograph

Fig. 4: Pre-treatment cephalometric radiograph

(*24˚*), and protrusive lips (*UL to E-line: 4mm, LL to E-line: 5mm*). The American Board of Orthodontics (*ABO*) Discrepancy Index (*DI*) was 34, as shown in the first worksheet at the end of this report.

CEPHALOMETRIC SUMMARY			
SKELETAL ANALYSIS			
	PRE-Tx	POST-Tx	DIFF.
SNA˚ (82°)	89°	88°	1°
SNB˚ (80°)	81°	81°	0°
ANB˚ (2°)	8°	7°	1°
SN-MP˚ (32°)	38°	38°	0°
FMA˚ (25°)	31°	31°	0°
DENTAL ANALYSIS			
U1 To NA mm (4 mm)	2 mm	1 mm	1 mm
U1 To SN˚ (104°)	104°	101°	3°
L1 To NB mm (4 mm)	9 mm	8 mm	1 mm
L1 To MP˚ (90°)	96°	93°	3°
FACIAL ANALYSIS			
E-LINE UL (-1 mm)	4 mm	3 mm	1 mm
E-LINE LL (0 mm)	5 mm	3 mm	2 mm
Convexity: G-Sn-Pg' (13°)	24°	24°	0°
%FH: Na-ANS-Gn (53%)	58%	57%	1%

Table 1: Cephalometric summary

Treatment Objectives

1. Reduce lip protrusion.
2. Align both arches in a Class I occlusion.
3. Improve smile esthetics.
4. Correct the dental midline deviation.

Treatment Alternatives

The convex profile, high mandibular plane angle, and dental crowding resulted in a complex orthodontic problem that was best managed with extractions. The first option, extraction of all 4 first premolars and all 4 third molars, presented two concerns: 1. axial inclination of maxillary incisors (*U1 to SN*) was normal, so closure of first premolar extraction sites could result in loss of torque (*distal tipping*) of the maxillary anterior segment, 2. extracting the horizontally impacted third molar risks complications such as alveolitis (*dry socket*), other post-operative infections, hemorrhage and/or nerve damage. The second alternative was the extraction of only four molars: both U7s, the LR7 and LL6. With this option all four, healthy third molars are retained and moved mesially to substitute for molars

that were missing or extracted. Although this option required TAD anchorage, it did preserve four healthy teeth, helped control axial inclination of the incisors, and also facilitated correction of the midline. After a thorough discussion, the patient was opposed to extracting 8 teeth (*option 1*), and preferred option 2 because only 4 teeth would be lost. She did accept the necessity for TAD anchorage.

Treatment Progress

The four molars (*UR7, UL7, LR7, LL6*) were extracted prior to beginning active treatment. A Damon Q™ 0.022-in slot self-ligating appliance (*Ormco®, Glendora, CA*) was bonded on all teeth in both arches. The Zoo-Series Elastics™ and all arch wires utilized for treatment of the current patient were produced by the same manufacturer. The arch sequence (*Table 2*) for the upper arch was: 0.014-in CuNiTi, 0.018-in CuNiTi, 0.014x0.025-in CuNiTi, 0.019x0.025-in pre-torqued NiTi, 0.017x0.025-in TMA. For the lower arch, the archwire progression was 0.014-in CuNiTi, 0.018-in CuNiTi, 0.014x0.025-in CuNiTi, 0.016x0.025-in SS, 0.017x0.025-in TMA.

At the beginning of the treatment, brackets were bonded from 6-6 in the upper arch and high-torque brackets were utilized on the incisors and canines. One month later, fixed appliances were bonded from 6-7 in the lower arch and low-torque brackets were utilized on the incisors and canines. Anterior bite turbos (*BTs*) were added to the palatal surfaces of both maxillary central incisors. Class II elastics (*Parrot 5/16-in, 2-oz*) were applied from U3s to L6s

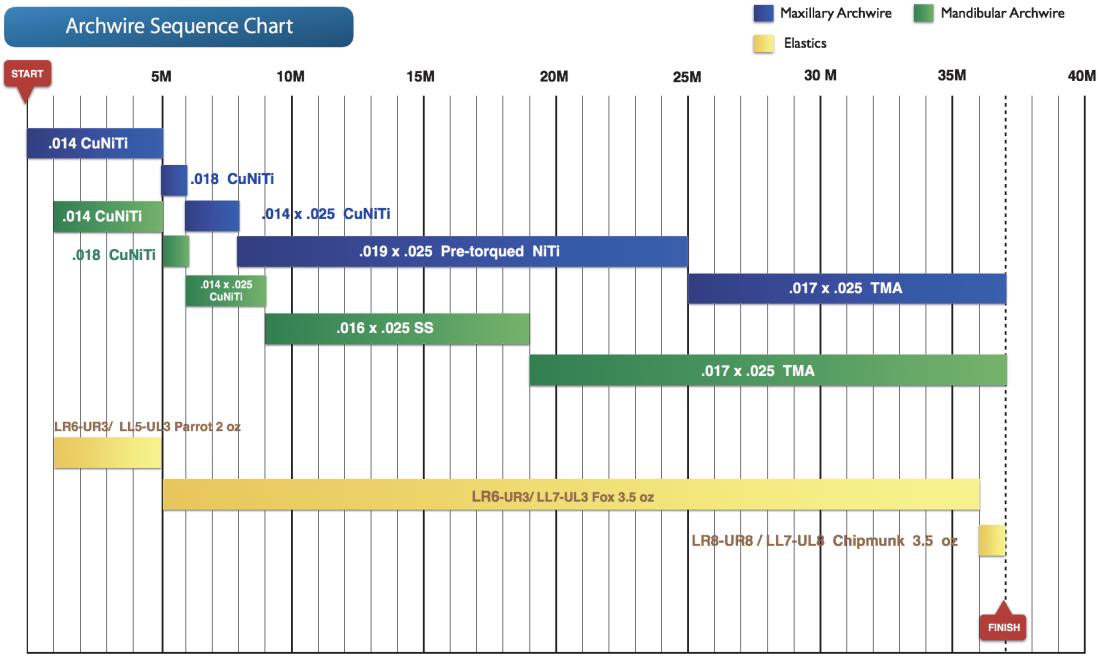

Table 2: Archwire sequence chart

bilaterally (*Fig. 5*). In the 5th month of treatment, the crown of the LR8 had emerged into the oral cavity. Brackets were bonded on all four third molars, and Class II elastics loads were increased to Fox 1/4-in, 3.5-oz.

Space was closed for all extraction sites with power chains (*Clear Generation II™, Ormco®, Glendora, CA*). In the 14th month, lingual buttons were bonded on the LR5, LR8, LL4 and LL7, and bilateral power chains were used on the buccal and lingual to close space. In the 29th month, lingual buttons were bonded on UR4, UR8, UL4, and UL8, and power chains were used on the buccal and lingual surfaces for space closure (*Figs. 6 and 7*).

Fig. 5: In the first month of treatment, Class II elastics were used from UR3 to UR6, and UL3 to LL5.

Fig. 6:
Maxillary arch correction is shown in a progressive series of occlusal photographs from the start of active treatment at zero month (0M) to the end of active treatment at thirty-eight months (38M).

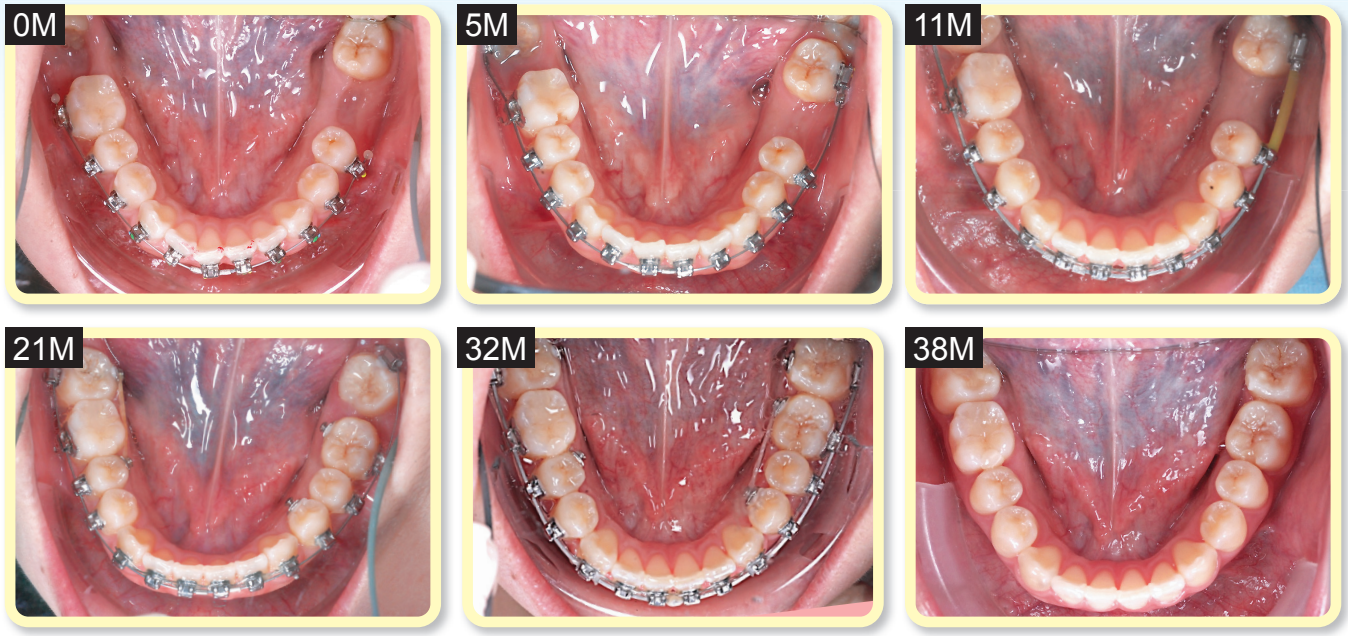

Fig. 7:
Mandibular arch correction is shown in a progressive series of occlusal photographs from the start of active treatment at zero month (0M) to the end of active treatment at thirty-eight months (38M).

The first treatment priority was to close as much extraction space as possible and then reposition the bracket about >90˚ of rotation on the LL8 in the 23rd month (*Fig. 8*). Due to limited crown exposure and uncertainty about the final position of the third molars, repeated bracket repositioning was required during treatment.

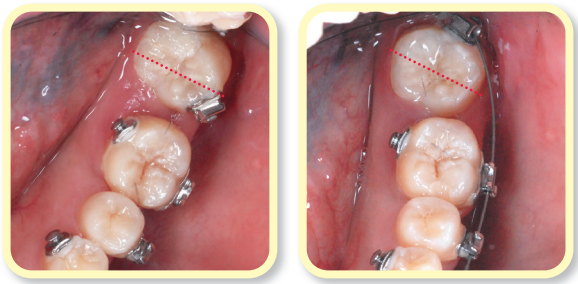

Fig. 8:
Left photograph shows the bracket on the LL8 before repositioning, relative to the desired midsagittal plane (red line). The right image shows the bracket after it is repositioned.

Preliminary alignment of both arches was achieved by 31 months, so the next priority was to address the convex profile and excessive gingival display. A 2x12mm miniscrew (*OBS®, iNewton Dental Ltd, Hsinchu, Taiwan*) was placed in each IZC to anchor intrusion and retraction of the entire maxillary arch. At the same appointment, two 1.5x8mm miniscrews made by the same manufacturer, were inserted bilaterally between the roots of the upper central and lateral incisors. Intrusive loads of 2-oz were applied bilaterally to correct the gummy smile, optimize maxillary symmetry, and offset the extrusive component of the Class II elastics (*Figs. 9 and 10*).

After 38 months of active treatment, all fixed appliances and bone screws were removed. The

Fig. 9:
Thirty-one months into treatment facial convexity is still a problem as documented in a lateral cephalometric radiograph (left) and facial profile photograph. Excessive gingival display with the lips parted is shown in a frontal view (right).

Fig. 10:
Two miniscrews are placed between the central and lateral incisors. They anchor forces to the archwire of 60~80gm (cN) per side. Two IZC miniscrews were inserted and loaded with 28gm (cN) per side.

periodontium in the maxillary anterior area was carefully evaluated and classified according to the level of the mucogingival junction (*MGJ*) and alveolar bone crest. It was classified as type IB: gingival width was within normal limits, but bone height was excessive.[10] Under a local anesthetic, a full-thickness mucoperiosteal flap was reflected, and crestal bone was removed with a #5 round carbide bur to establish a uniform 2mm zone between the alveolar crest and CEJ (*Fig. 11*). Following the osteoplasty procedure, the tissue was repositioned slightly coronal to the CEJ and sutured with #4 Gore-Tex® sutures (*Gore Medical Products, Flagstaff, AZ*).[11]

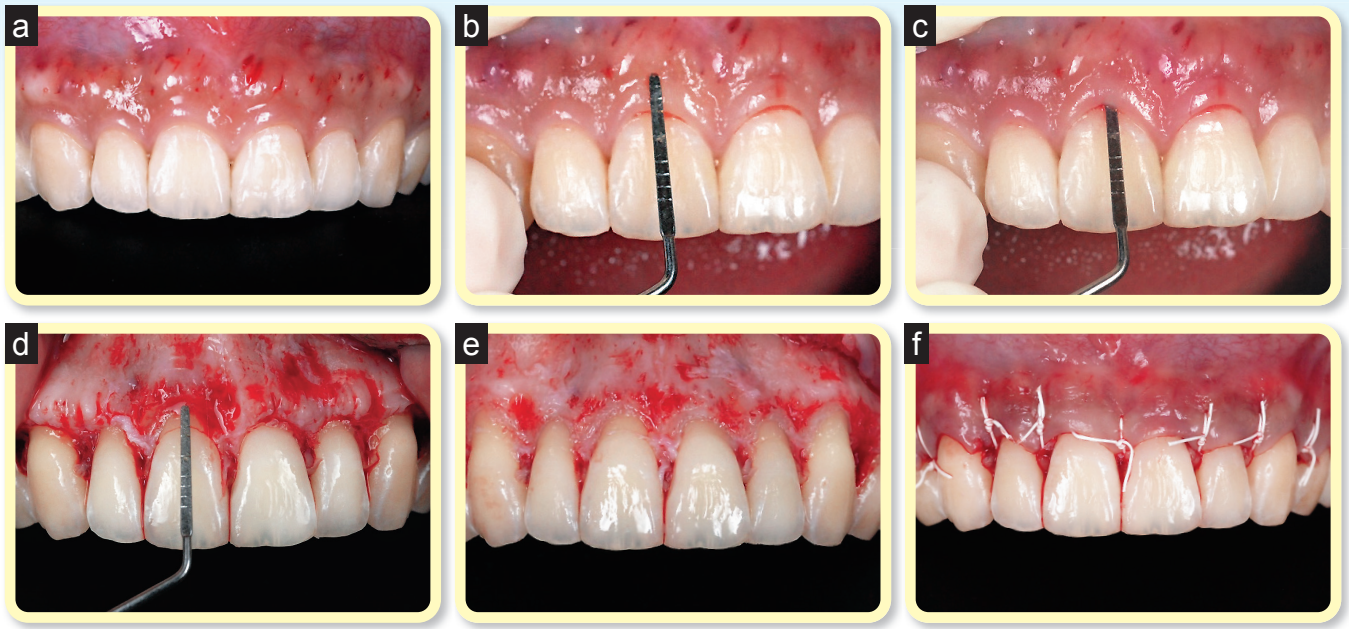

Fig. 11:
The crown-lengthening surgical procedure is documented as follows: (a) pre-treatment the short clinical crowns with excessive gingival display and bulky bone structure surrounding the root area, (b) the width of keratinized gingival was evaluated, (c) bone sounding under local anesthetic located the alveolar crest of bone, (d) bone was removed at the alveolar crest with a #5 round carbide bur, (e) a uniform 2mm biological zone was established for soft tissue attachment between the CEJ to the alveolar crest, (f) the flap was repositioned and sutured.

The stitches were removed one week post-operatively. A lingual fixed retainer was bonded from UR2 to UL2, and clear overlay retainers were constructed. The patient was instructed to wear the removable retainers full time for the first 6 months and nights only thereafter. Home care and retainer maintenance instructions were provided.

Treatment Results

Retraction of the upper and lower lips significantly improved the patient's facial profile (*Figs. 13 and 15*). Surgical crown lengthening resulted in improved crown ratios and an esthetically pleasing maxillary anterior segment (*Fig. 12*). Panoramic radiograph documented acceptable root alignment (*Fig. 14*). Cephalometric superimpositions revealed the

Fig. 12:
Upper image is a frontal view of the maxillary anterior segment documenting esthetics prior to crown lengthening procedure. Lower image shows the one month post-operative results.

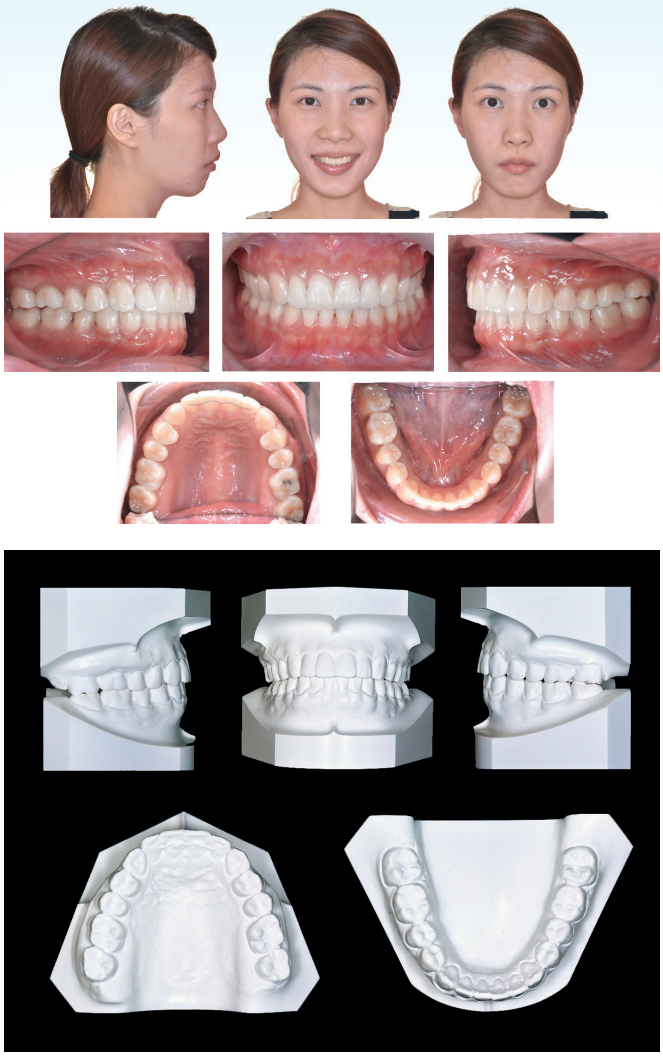

Fig. 13: Post-treatment outcomes are shown in facial images, intraoral photographs, and study models (casts).

Fig. 14: Post-treatment panoramic radiograph

maxillary incisors were retracted about 3mm, without a compromise in the axial inclinations. Mandibular incisors were bodily retracted about 2mm (*Fig. 16*). The overbite and overjet were ideal. A Class I molar relationship was achieved on the right, but the buccal interdigitation was about 2mm Class II on the left. Both arches were well aligned with healthy third molars were substituted for second molars. The ABO Cast-Radiograph Evaluation (*CRE*) score was 28 points, as shown in the second work sheet at the end of this report. The major discrepancies were occlusal relationships (*8 points*), alignment (*4 points*), and occlusal contacts (*4 points*). The Pink & White dental esthetic index was scored at 5 points, as shown in the third worksheet. The patient was satisfied with the treatment results, and the outcome was stable 2 years later (*Fig. 17*).

Fig. 15: Post-treatment lateral cephalometric radiograph

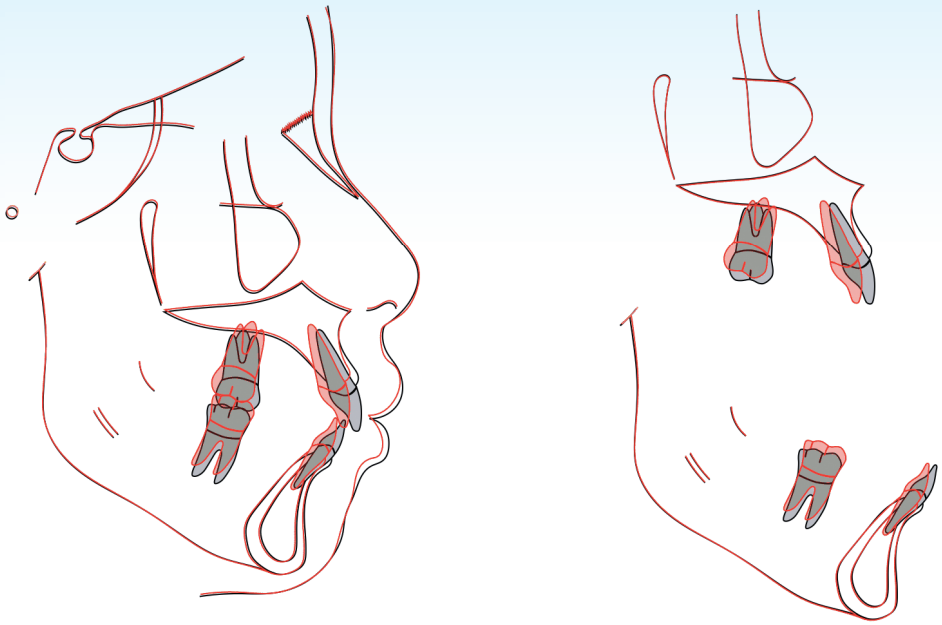

Fig. 16:
Superimposed cephalometric tracings before (black) and after treatment (red) document the dentofacial changes resulting from 38 months of active therapy.

Fig. 17: Two-year follow-up facial and intraoral photographs

Discussion

Impacted third molars present risks when extracted,[1-5] so retaining them is often a good option. Patients with missing or compromised first and second molars may be good candidates for third molar substitution.[6-8] Furthermore second and third molars can be moved anteriorly to replace a missing first molar.[9] Premolars are the teeth of choice for most extraction treatment plans, but molar extraction can be a viable option. Second molar extraction often results in spontaneous eruption of the adjacent third molar, and the posterior space may be useful for correcting anterior crowding and protrusion. However, substantial anchorage demands may require TADs.

Removing compromised first or second molars, instead of healthy premolars and third molars, is highly recommended in the following circumstances: 1. first or second molars are severely damaged, ectopically erupted or rotated, 2. posterior crowding and/or blocked-out teeth, and 3. third molars have a favorable position, size and shape.[7] The present patient meets the first and third of these criteria (*Figs. 1-3*).

Panoramic radiography suggests that the mesiodistal size of the third molars is suitable for substitution of the second molars (*Figs. 3 and 14*), but even small discrepancies can affect interdigitation. On average, the maxillary third molars are 0.7mm smaller than the adjacent second molars, and the mandibular third molars are 0.55mm larger than the respective lower second molars.[12] This small tooth size discrepancy may compromise occlusal relationships (*interdigitation*), as shown in Fig. 13. These minor intermaxillary discrepancies have little functional significance because occlusion and periodontal health are usually satisfactory after substituting third molars for second molars.[13]

De-la-Rosa-Gay reported a total of 96.2% maxillary and 66.2% mandibular third molars erupted in good positions after extraction of the adjacent second molars. A successful third molar position was defined as having proximal contact with the adjacent first molar and an angle between the molars of no more than 35˚. Spontaneous eruption is an important advantage for molar substitution that is related to the stage of tooth development. Nolla,[14] proposed a 1960 method for assessing tooth development that was recently revalidated with a large modern sample.[15] Spontaneous eruption of third molars is likely for a Nolla developmental stage 1-8 (*Fig. 18*), but is increasingly unlikely for mandibular third molars in older patients, particularly with a more mature Nolla developmental stage.[6]

A logistic regression model predicts the probability of favorable third molar eruption by using the variables of initial angle between the first and third molars, jaw, sex, age, and the developmental stage of the third molar.[16] Successful eruption is more likely

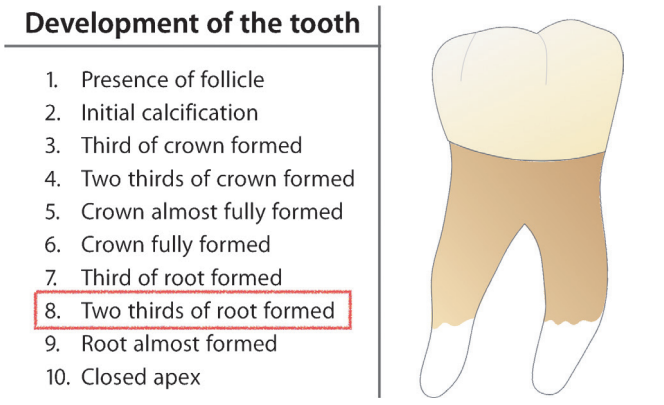

Fig. 18: *Nolla stages of tooth development are useful for determining the developmental stage for third molars. For the molar illustrated (right), the stage of development is 8. Two thirds of root formed as highlighted with the red rectangle (left).*

for males, the upper arch, cases with a small initial angle between the first and the third molars, earlier developmental stages, and younger patients (*Fig. 19*).

There are three advantages for extracting second molars and substituting third molars. First, third molar eruption is facilitated by second molar extraction, thereby avoiding the need for surgical exposure. Second, there is less distal tipping of the anterior teeth during space closure compared to premolar extraction. Third, the extraction site(s) are less invisible.[7]

The principal disadvantages for substituting third molars are the unpredictable eruption and final position of the teeth. An additional phase of fixed mechanics may be necessary for alignment, which considerably extends the total treatment time.[7] The average time for spontaneous eruption of third molars is four years,[6] but orthodontic treatment is indicated as soon as sufficient clinical crown is exposed for bonding of a bracket (*Fig. 8*). If the third molar fails to erupt, surgical uncovering is usually necessary to expose the crown.[17,18]

Another significant problem when substituting lower third for second molars is that the large space created by the second molar extraction is distant from the crowded and/or protrusive incisors. TADs may be necessary, but retraction of the anterior segment and the tendency for natural mesial migration assists in closing large posterior extraction spaces.[7,8] Using buccal and lingual force facilitates the extraction space closure and prevents third molars from rotating distal out (*Fig. 20*).[18]

Although the results for the current patient are satisfactory, the final lip protrusion (*UL to E-line: 3mm, LL to E-line: 3mm*) is less than ideal (*UL to E-line: -1mm, LL to E-line: 0mm*). In retrospect, placing the IZC miniscrews earlier in treatment enhances the anchorage for incisor retraction, but it's difficult to determine if TADs are actually necessary before the arches are aligned (*Fig. 9*).

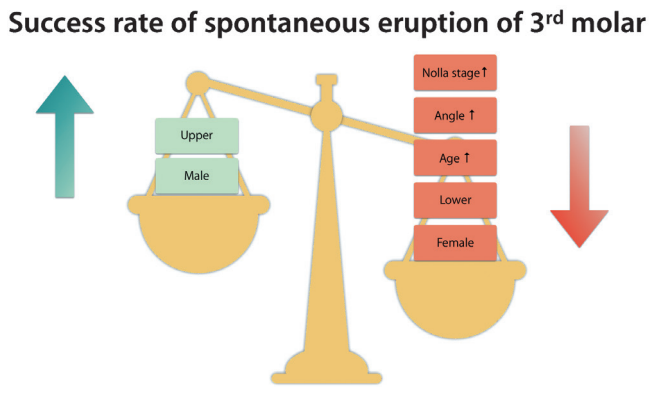

Fig. 19:
Probability for successful spontaneous eruption of a third molar after second molar extraction can be estimated by listing the positive factors (Upper arch, Male) shown in green, and the negative factors (high Nolla stage, excessive molar angle, increased age, Lower arch, Female) shown in red. Each patient must be individually assessed relative to initial molar angle, jaw, sex, age, and third molar developmental stage.

Fig. 20:
Bilateral closure of upper second molar spaces is facilitated by using equal (balanced) forces, applied with power chains on the buccal and lingual surfaces. Balanced forces help control undesirable rotations and archwire binding during space closure.

Conclusions

1. Substituting a horizontally impacted LR8 for a compromised LR7 was a superior outcome compared to extracting a sound premolar.

2. Aligning the horizontally impacted LR8 avoided a number of potential surgical risks.

3. Effective management of third molar substitution resulted in substantial retraction of the incisors and reduction of lip protrusion.

4. Balanced buccal and lingual loads are effective mechanics for closing large posterior spaces.

5. IZC and incisal miniscrews supplement maxillary anchorage for retracting incisors, decreasing lip protrusion, and controlling the extrusive component of Class II elastics.

6. Crown lengthening improved maxillary anterior esthetics by correcting the height to width ratio of the incisors and smoothing bulky exostoses under the labial gingiva.

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Discrepancy Index Worksheet

TOTAL D.I. SCORE 34

OVERJET

0 mm. (edge-to-edge)	=	1 pt.
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 = 2

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 = 4

OCCLUSION

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

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 ≥ 6° or ≤ -2° = 4 pts.

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

Each degree > 6° 2 x 1 pt. = 2

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 = 8

OTHER (See Instructions)

Supernumerary teeth	_____ x 1 pt. =	_____
Ankylosis of perm. teeth	_____ x 2 pts. =	_____
Anomalous morphology	_____ x 2 pts. =	_____
Impaction (except 3rd molars)	Aligned x 2 pts. =	2
Midline discrepancy (≥3mm)	@ 2 pts. =	2
Missing teeth (except 3rd molars)	_____ x 1 pts. =	_____
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	4 x 2 pts. =	8

Identify: Close 4 extracted spaces without severe crowding + Deep curve of Spee

Total = 12

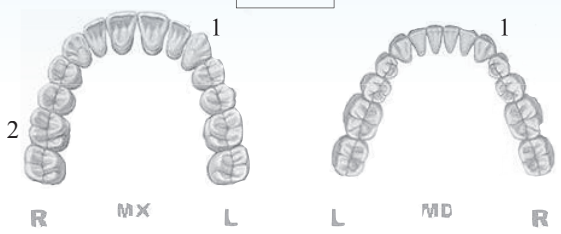
Cast-Radiograph Evaluation

Case # **Patient**

Total Score: 28

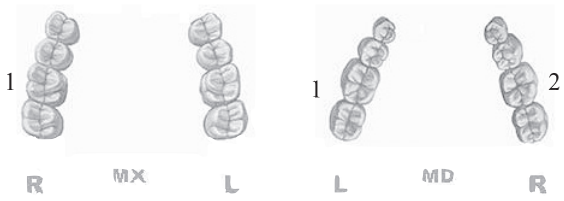
Alignment/Rotations

4



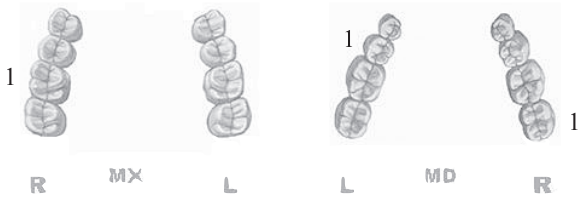
Marginal Ridges

4



Buccolingual Inclination

3

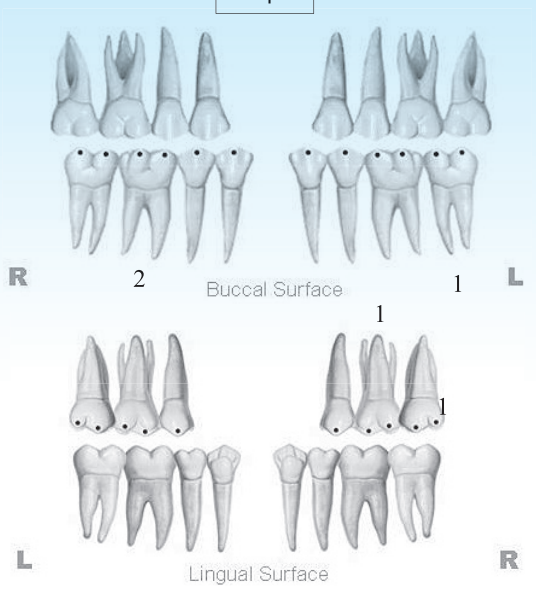


Overjet

3

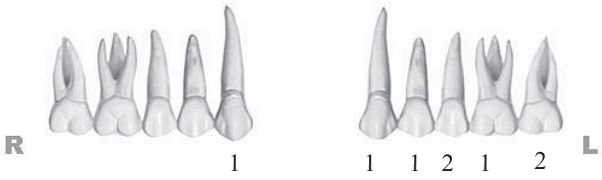
Occlusal Contacts

4



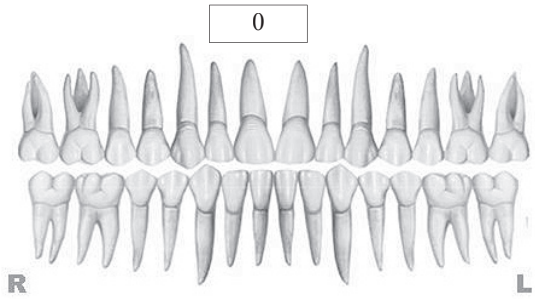
Occlusal Relationships

8



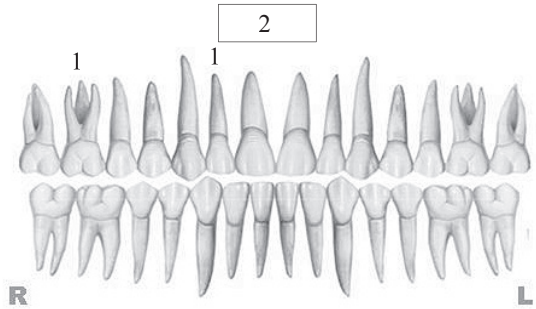
Interproximal Contacts

0



Root Angulation

2



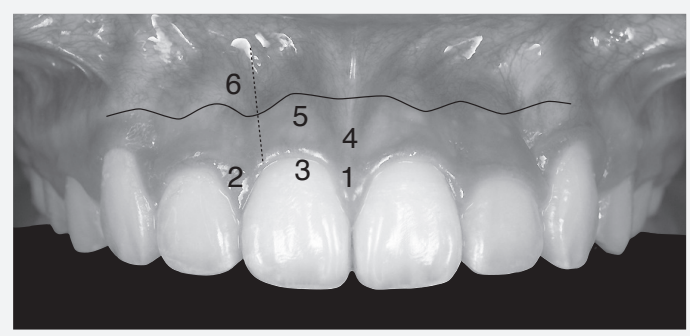
INSTRUCTIONS: Place score beside each deficient tooth and enter total score for each parameter in the white box. Mark extracted teeth with "X". Second molars should be in occlusion.

IBOI Pink & White Esthetic Score

Total Score: = 5

1. Pink Esthetic Score

Total = 3

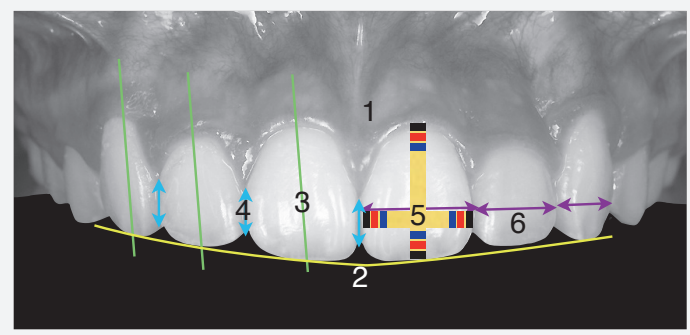


1. M & D Papillae	0	1	2
2. Keratinized Gingiva	0	1	2
3. Curvature of Gingival Margin	0	1	2
4. Level of Gingival Margin	0	1	2
5. Root Convexity (Torque)	0	1	2
6. Scar Formation	0	1	2

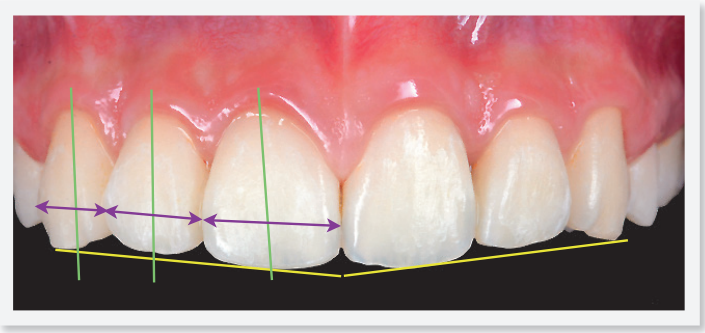
1. M & D Papilla	(0)	1	2
2. Keratinized Gingiva	(0)	1	2
3. Curvature of Gingival Margin	(0)	1	2
4. Level of Gingival Margin	0	(1)	2
5. Root Convexity (Torque)	0	1	(2)
6. Scar Formation	(0)	1	2

2. White Esthetic Score (for Micro-esthetics)

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 (1:0.8)	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 (1:0.8)	(0)	1	2
6. Tooth to Tooth Proportion	0	(1)	2