

CLINICAL CASES SHOWING AESTHETICS AFTER BIMAXILLARY SURGERY ON SKELETAL CLASS II PATIENTS

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Introduction

SUBJECTS AND METHOD: Three cases showing patients who underwent bimaxillary surgery.

AIM: A Class II skeletal deformity is frequently considered to be a unilateral maxillary problem. The purpose of this presentation is to show that solving Class II skeletal problems can be achieved with bimaxillary surgery¹ even when the problem is unilateral. A further aim is to show the benefit of a team approach² and the aesthetic results of a series of severe Class II patients who underwent bimaxillary surgery.

Case 1:



Fig. 1 – Initial Pictures of Case 1

DIAGNOSIS SUMMARY

- Angle Class II
- Retrognathic Maxilla: SNA = 72°
- Retrognathic Mandible: SNB = 65°
- Hyperdivergent

TREATMENT PLAN

- Upper and lower braces
- Extraction of 18,28,38 and 48
- Maxilla: Le Fort I for impaction and advancement
- Mandible: BSSO (Bilateral Sagittal Split Osteotomy) advancement surgery



Fig. 2 – Final pictures of Case 1

Frontal View - Facial Aesthetics	Before Surgery	After Surgery
Vertical Analysis	Increased Lower Facial Height	Balanced
Horizontal Analysis	Balanced	Balanced
Face Type	Oval	Square
Facial Symmetry	Symmetric	Symmetric
Lip strain	Strained lips	No lip strain
Incisors show on Smile	100%	100%
Gingival display on Smile	4mm	1mm
Buccal corridors	Excess	Normal
Upper Midline	1mm right of Facial Midline	Coincident with Facial Midline

Table 1 – Frontal View – Facial Aesthetic of Case 1

Lateral View - Facial Aesthetics	Before Surgery	After Surgery
Profile	Convex	Straight
Naso labial angle	Obtuse	WNL
Mento labial sulcus	Deep	WNL
Arnnet Vertical Line:		
• Upper Lip	WNL	WNL
• Lower Lip	Retruded	WNL
• Chin	Retruded	WNL
Throat Angle	Obtuse	WNL

Table 2 – Lateral View – Facial Aesthetic of Case 1
WNL (within normal limits)

Case 2:



Fig. 3 – Inicial pictures of Case 2

DIAGNOSIS SUMMARY

- Angle Class II
- Retrognathic Maxilla: SNA = 78°
- Retrognathic Mandible: SNB = 72°
- Hyperdivergent

TREATMENT PLAN

- Upper and lower braces
- Extraction of 24 and 34
- Maxilla: Le Fort I for impaction and advancement
- Mandible: BSSO (Bilateral Sagittal Split Osteotomy) advancement surgery



Fig. 4 – Final pictures of Case 2

Frontal View - Facial Aesthetics	Before Surgery	After Surgery
Vertical Analysis	Increased Lower Facial Height	Increased Lower Facial Height
Horizontal Analysis	Balanced	Balanced
Face Type	Oval	Oval
Facial Symmetry	Symmetric	Symmetric
Lip strain	Strained lips	No lip strain
Incisors show on Smile	100%	98%
Gingival display on Smile	8mm	1mm
Buccal corridors	Obliterated	Obliterated
Upper Midline	2mm right of Facial Midline	Coincident with Facial Midline

Table 3 – Frontal View – Facial Aesthetic of Case 2

Lateral View - Facial Aesthetics	Before Surgery	After Surgery
Profile	Convex	Straight
Naso labial angle	Obtuse	WNL
Mento labial sulcus	Acute	WNL
Arnnet Vertical Line:		
• Upper Lip	WNL	WNL
• Lower Lip	Retruded	WNL
• Chin	Retruded	WNL
Throat Angle	Obtuse	WNL

Table 4 – Lateral View – Facial Aesthetic of Case 2

Case 3:



Fig. 5 – Initial pictures of Case 3

DIAGNOSIS SUMMARY

- Angle Class II
- Retrognathic Maxilla: SNA = 72°
- Retrognathic Mandible: SNB = 65°
- Hyperdivergent

TREATMENT PLAN

- Upper and lower braces
- Maxilla: Le Fort I for impaction and advancement
- Mandible: BSSO (Bilateral Sagittal Split Osteotomy) advancement surgery and assymetry correction



Fig. 6 – Final pictures of Case 3

Frontal View - Facial Aesthetics	Before Surgery	After Surgery
Vertical Analysis	Increased Lower Facial Height	Balanced
Horizontal Analysis	Unbalanced	Balanced
Face Type	Oval	Round
Facial Symmetry	Chin Asymmetry 4mm to the right	Symmetric
Lip strain	Strained lips	No lip strain
Incisors show on Smile	100%	100%
Gingival display on Smile	5mm	2mm
Buccal corridors	Excess	WNL
Upper Midline	Coincident with Facial Midline	Coincident with Facial Midline

Table 5 – Frontal View – Facial Aesthetic of Case 3

Lateral View - Facial Aesthetics	Before Surgery	After Surgery
Profile	Straight	Straight
Naso labial angle	WNL	WNL
Mento labial sulcus	WNL	WNL
Arnnet Vertical Line:		
• Upper Lip	WNL	WNL
• Lower Lip	WNL	WNL
• Chin	WNL	WNL
Throat Angle	WNL	WNL

Table 6 – Frontal View – Facial Aesthetic of Case 3

References:

1. Abraham J, Bagchi P, Gupta S, Gupta H, Autar R. Combined orthodontic and surgical correction of adult skeletal class II with hyperdivergent jaws. Natl JMaxillofac Surg. 2012;3(1):65-9.
2. Shimo T, Nishiyama A, Jinno T, Sasaki A. Severe gummy smile with class II malocclusion treated with LeFort I osteotomy combined with horseshoe osteotomy and intraoral vertical ramus osteotomy. Acta Med Okayama. 2013;67(1):55-9
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Results

Good aesthetic results were achieved together with a functional and stable occlusion.

Conclusion

Orthognathic surgery is the best option when camouflage is not possible and growth modification is limited. Bimaxillary surgery is often necessary to achieve good aesthetic results in Class II patients.³