

ORTHOGNATHIC CASE PRESENTATION

BY : M MANOJ KUMAR
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Name :BHAVIYA

Age/Sex : 24 years / Female

Reg no. : 421429

Address : , Sholganur, Chennai

Occupation :Working in WIPRO IT

First Reported on : 03-05-2018

**Chief Complaint : Forwardly placed Lower
Jaw and backwardly placed of upper
Jaw region**





- ▶ **Motivated : Internal**

- ▶ **Past Medical History : Pneumonia 7 years back
septoplasty 2 years back
Appendixectomy 1 year back**

- ▶ **Past Dental History : undergoing orthodontic treatment since 5 years**

- ▶ **General Examination :**
 - **Height : 5 ft 7 inches**
 - **Growth status : Normal**
 - **Weight : 50 kgs**
 - **Vitals : Stable , Normal.**

▶ Examination of Head Face Neck

- Position of Head : Normal & Straight
- Symmetry of Face : Mandible deviated to the left
- Inter-canthal Distance : 33 mm

▶ Facial Proportions

- ▶ Upper One third : 72 mm
- ▶ a. Cranium – Normal
- ▶ b. Supraorbita – Normal



- ▶ Middle One third : 68 mm
- ▶ Orbit And Eyes - Normal
- ▶ Malar Region - FLAT
- ▶ Nose - Normal
- ▶ Septal deviation - No septal deviation
- ▶ Alar Base Width - 30 mm
- ▶ Nasal base width - 29 mm
- ▶ Inner Alar distance - 21 mm



Lower One Third - 70 mm

Upper Lip Length - 19 mm

Protrusion Of Lip - Retruded

Tone - Normotonic (passive)

Thickness - 8 mm





- ❖ Vermillion Exposure - 10 mm
- ❖ Incisor Exposure At Rest – 5.5 mm
- ❖ Incisor Exposure At Smile – 10mm(incisal)

- ❖ Maxillary Midline To Mid Sagittal Plane
 - Upper Dental midline shifted to right side (7mm)

- ❖ Inter Labial Distance - 6 mm

Lower Lip

- ▶ Vermillion Exposure - 14 mm
- ▶ Tone - hypertonic, everted
- ▶ Thickness - 12 mm
- ▶ Labio Mental Sulcus - Shallow
- ▶ Chin - prominent
- ▶ E Line - Upper lip behind by 12mm
lower lip ahead by 1mm
- ▶ Nasolabial Angle - Acute



TMJ Examination

no abnormality present

- ▶ Neck Movement - Normal
- ▶ Airway Assessment - Mallampatti Class- 2

Intra Oral Examination

Teeth	7 6 5 3 2 1	1 2 3 5 6 7
	7 6 5 4 3 2 1	1 2 3 4 5 6 7

Maximum Mouth Opening - 48 mm

Mandible Deviation - mandibular deviating towards left on closing the mouth

- ▶ Spacing – 14
- ▶ Tongue - Normal size, posture, function.
- ▶ Overjet - REVERSE 5 mm
- ▶ Overbite - 2mm



Occlusion - RIGHT Class - III Molar relation
POSTERIOR CROSSBITE , LEFT class 1 relation





► Arch relationship :

Maxillary : U shaped
shaped

Mandibular : V



PROFILE



$\frac{3}{4}$ th PROFILE



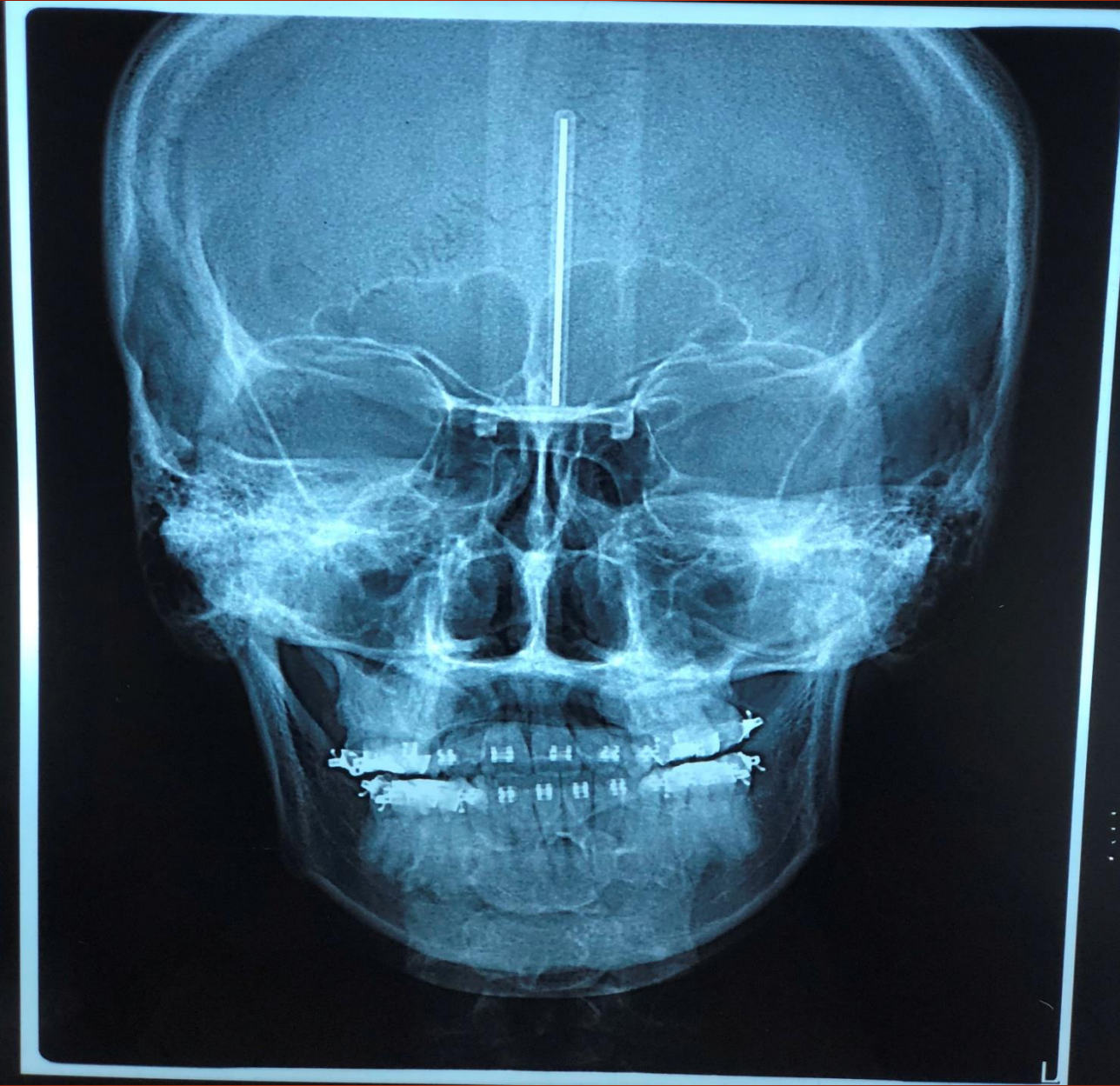
FACEBOW TRANSFER



RADIOGRAPHS :







GRUMMONS ANALYSIS

	RIGHT	LEFT	DIFFERENCE
▶			
▶ Co Distance	45	44	1 mm
▶ Ag angle	125*	128*	
▶ Co-Ag Distance	64mm	52mm	12mm
▶ Co-Me Distance	88mm	97mm	9mm
▶ Ag-Me Distance	48 mm	46mm	2mm
▶ Nc Distance	16mm	15mm	1mm
▶ J Distance	34mm	30mm	4mm
▶ ZA Distance	75mm	72mm	3mm
▶ Ag Distance	44mm	36 mm	8 mm

Burstone Analysis [Hard tissue]

LANDMARKS	<u>FEMALE</u> (normal)	<u>Patients</u> <u>value</u>	Inference
<u>Cranial base :</u> S -N Length		71 mm	
Ar-Ptm (11 to Hp)	32.1±1.9	27 mm	Decreased post. Cranial base length
Ptm-N(11 to Hp)	50.9±3.0	49 mm	Avg ant. Cranial base length
<u>Horizontal</u>			
N-A-Pg(Angle)	2.6*±5.1*	-15*	Increased facial Concavity
N-A(11 to Hp)	2±3.7	- 10 mm	Retrognathic Maxilla
N-B (11 to Hp)	-6.9±4.3	5 mm	Prognathic Mandible

Burstone Analysis [Hard tissue]

<u>Vertical (Skeletal)</u>	Female	<u>Patients value</u>	Inference
N-ANS(perp to Hp)	50±2.4	48 mm	Average middle 1/3 rd facial height
ANS-Gn(perp to Hp)	61.3±3.3	63 mm	Average ant lower 1/3 rd of facial height
PNS-N(Perp to Hp)	50.6±2.2	47 mm	Lower end of Maxillary height
Mp-Hp(Angle)	24.2±5.5	26*	Average post divergence of Mn. Plane angle
<u>Vertical (Dental)</u>			
U1 -NF(perp to NF)	27.5±1.7	22 mm	Decrease ant. Maxi. Dentoalveolar ht
L1-MP(Perp to MP)	40.8±1.8	42 mm	HEN ant Mandi. Dentoalveolar ht

Burstone Analysis [Hard tissue]

<u>Maxilla-- Mandible</u>	female	Patients value	Inference
PNS-ANS(11 to-Hp)	52.6±3.5	39 mm	Decreased maxillary length
Ar-Go(Linear)	46.8±2.5	42 mm	Average Ramal length
Go-Pg(Linear)	74.3±5.8	82 mm	Increased body length
B-Pg(11 to MP)	7.2±1.9	9.5 mm	HEN chin prominence
Ar-Go-Gn(Gonial Angle)	122*±6.9*	124*	Average Gonial angle
<u>Dental</u>			
OP-Hp(Angle)	7.1*±2.5*	2 *	decreased occlusal plane angle
A-B(11 to OP)	-0.4±2.5	16 mm	Class III skeletal pattern
U1-NF(Angle)	112.5*±5.3*	125*	Procumbency of maxi. incisors
L1-MP(Angle)	95.9*±5.7*	89*	LEN of Mn incisors

Burstone Analysis [Soft Tissue]

<u>LANDMARKS</u>	<u>MEAN</u>	<u>Patient value</u>	<u>INFERENCE</u>
<u>FACIAL FORM</u>			
Facial convexity Angle(G-Sn-Pg)	12*±4*	5 *	Concave, Class III skeletal & Dental Profile
<u>Maxillary prognathism (G-Sn)</u>	<u>6±3</u>	1mm	Retrognathic maxilla
<u>Mandibular prognathism (G-Pg)</u>	<u>0±4</u>	5 mm	Prognathic mandible
<u>Vertical height ratio(G-Sn/Sn-Me)</u>	<u>1±1</u>	58/72	Average ratio
<u>Lower Face Throat Angle (Sn-Gn-C)</u>	<u>100±7</u>	96 *	Normal Chin-Throat Angle
<u>Lower vertical height depth ratio (Sn-Gn/C-Gn)</u>	<u>1:2</u>	1.4 : 1	Average lower height vertical depth ratio

Burstone Analysis [Soft tissue]

Lip position & form	Mean	Patient value	Inference
<u>Naso labial angle (Cm-Sn-Ls)</u>	<u>102*±8*</u>	103*	Average nasiolabial angle
<u>Upper lip protrusion (Ls to Sn-Pg)</u>	<u>3±1</u>	1 mm	Upper lip retrusion
<u>Lower lip protrusion (Li to Sn-Pg)</u>	<u>2±1</u>	-6 mm	Protrusive Lower lip
<u>Mento labial sulcus (Si to Sn-Pg)</u>	<u>4±2</u>	5 mm	Average MentoLabial Sulcus
<u>Vertical lip:chin ratio (Sn-Stm/Sti-Me)</u>	<u>1:2</u>	1 : 25	Average vertical lip : chin ratio
<u>Maxillary incisor exposure (Stm-U1)</u>	<u>2±2</u>	5 mm	increased incisor exposure with lips in repose
<u>Inter labial gap (Stm0-stm1)</u>	<u>2±2</u>	4 mm	Average Inter-labial Gap

PROBLEM LIST ..

▶ HARD TISSUE

- Decreased posterior cranial base (by 3mm)
- Decreased Facial Concavity (by 13*)
- Retrognathic Maxilla (by 10mm)
- Prognathic Mandible (by 5mm)
- Prognathic Chin (by 8mm)
- Decreased upper anterior dental height (by 3mm)
- Decreased lower Posterior dental height (by 1mm)
- Decreased Maxillary Length (by 10mm)
- Increased mandibular body length (by 2mm)
- Increased maxillary incisor angulation (by 8*)
- Class III Skeletal occlusal pattern
- Maxillary cant 4mm

PROBLEM LIST ..

► SOFT TISSUE

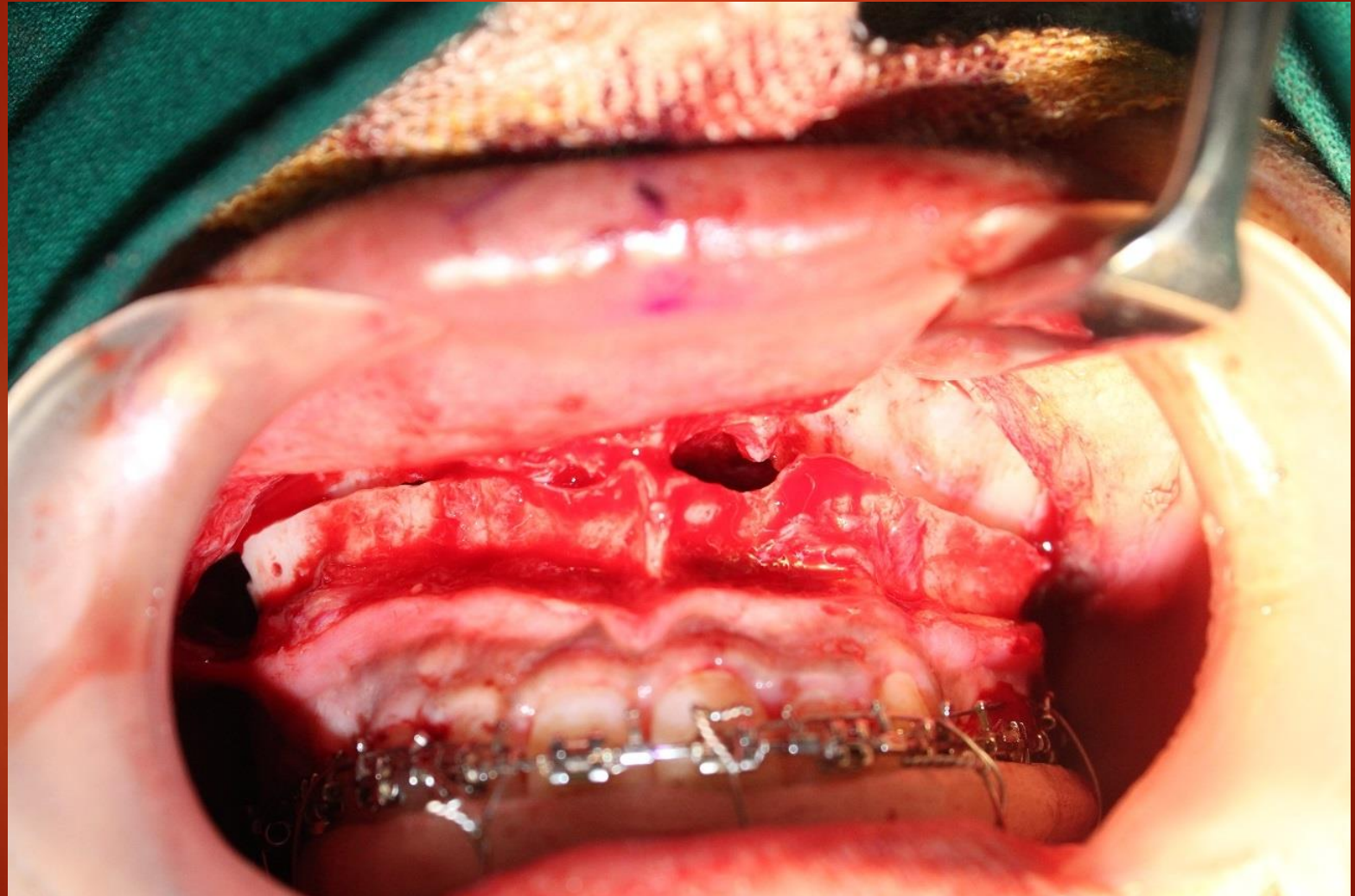
- Concave profile
- Class III skeletal & Dental Profile
- Prognathic mandible
- Prognathic chin
- Retrognathic maxilla
- Nasolabial Angle - Acute ; Maxillary Hypoplasia
- Retrusive Upper Lip
- Protrusive Lower lip (4mm)

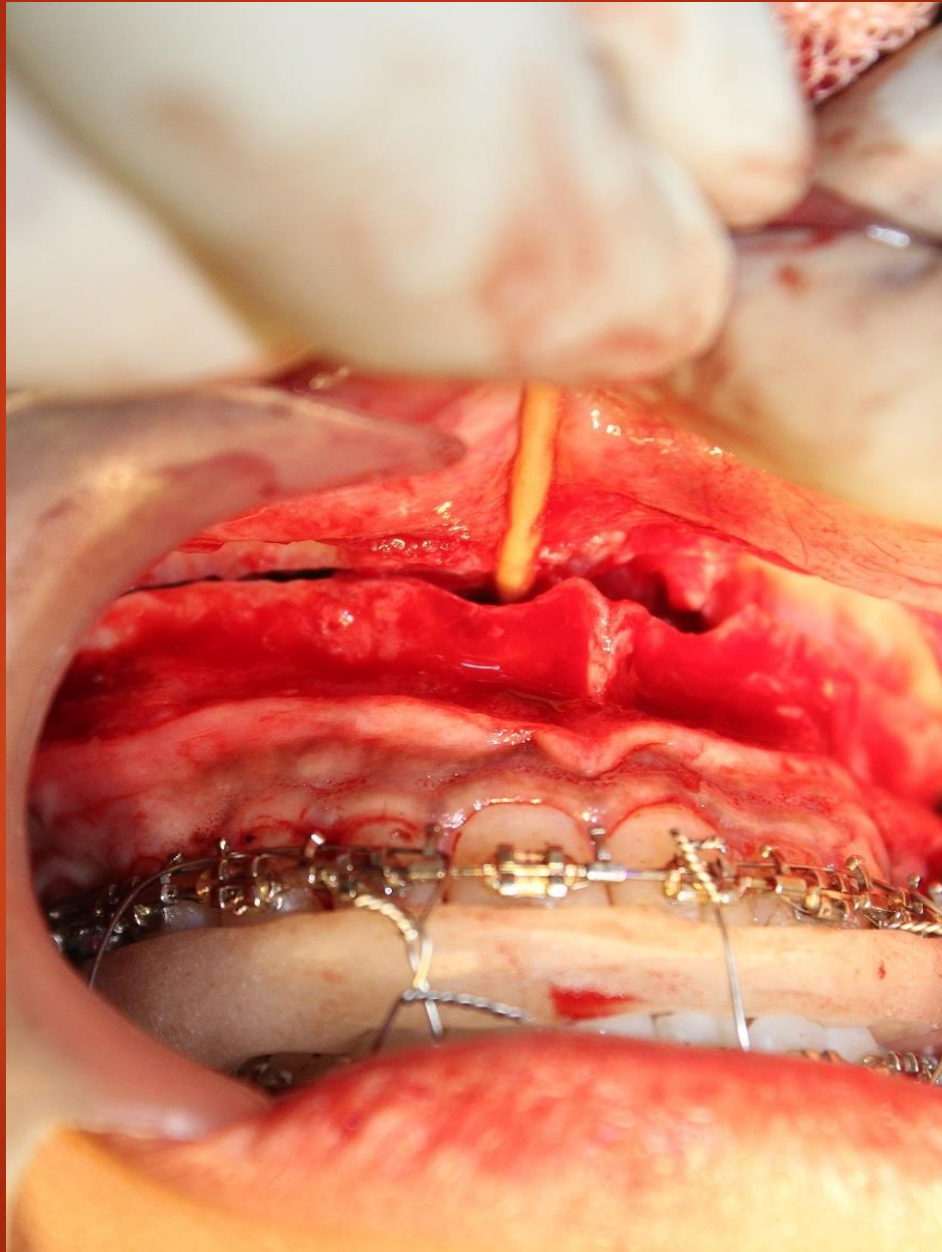
Increased incisor exposure at rest (5mm)

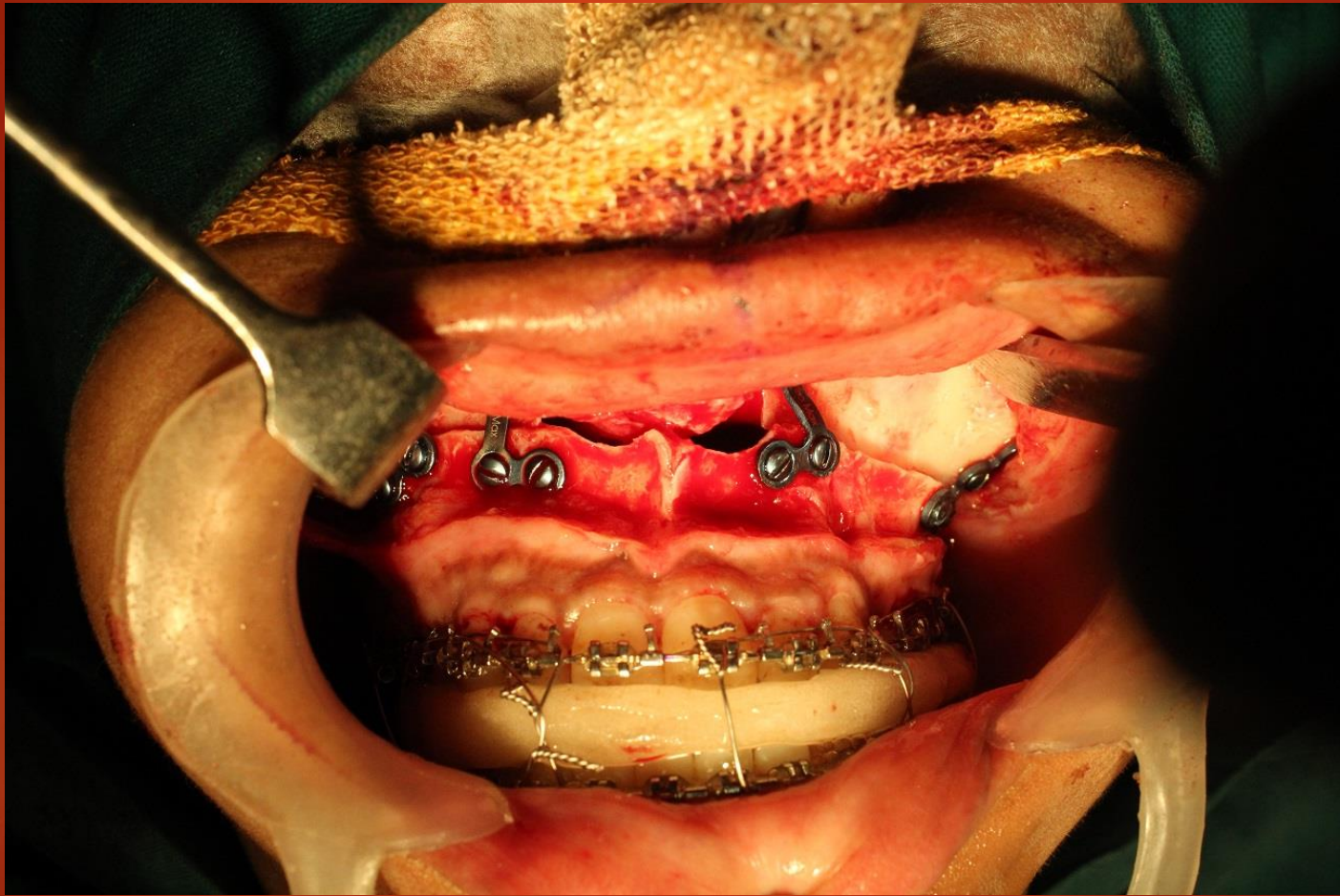
TREATMENT PLAN

- ▶ LEFORT 1 advancement 5 mm
- ▶ 3mm cant correction
- ▶ 7mm midline correction
- ▶ BSSRO into occlusion(3mm setback)

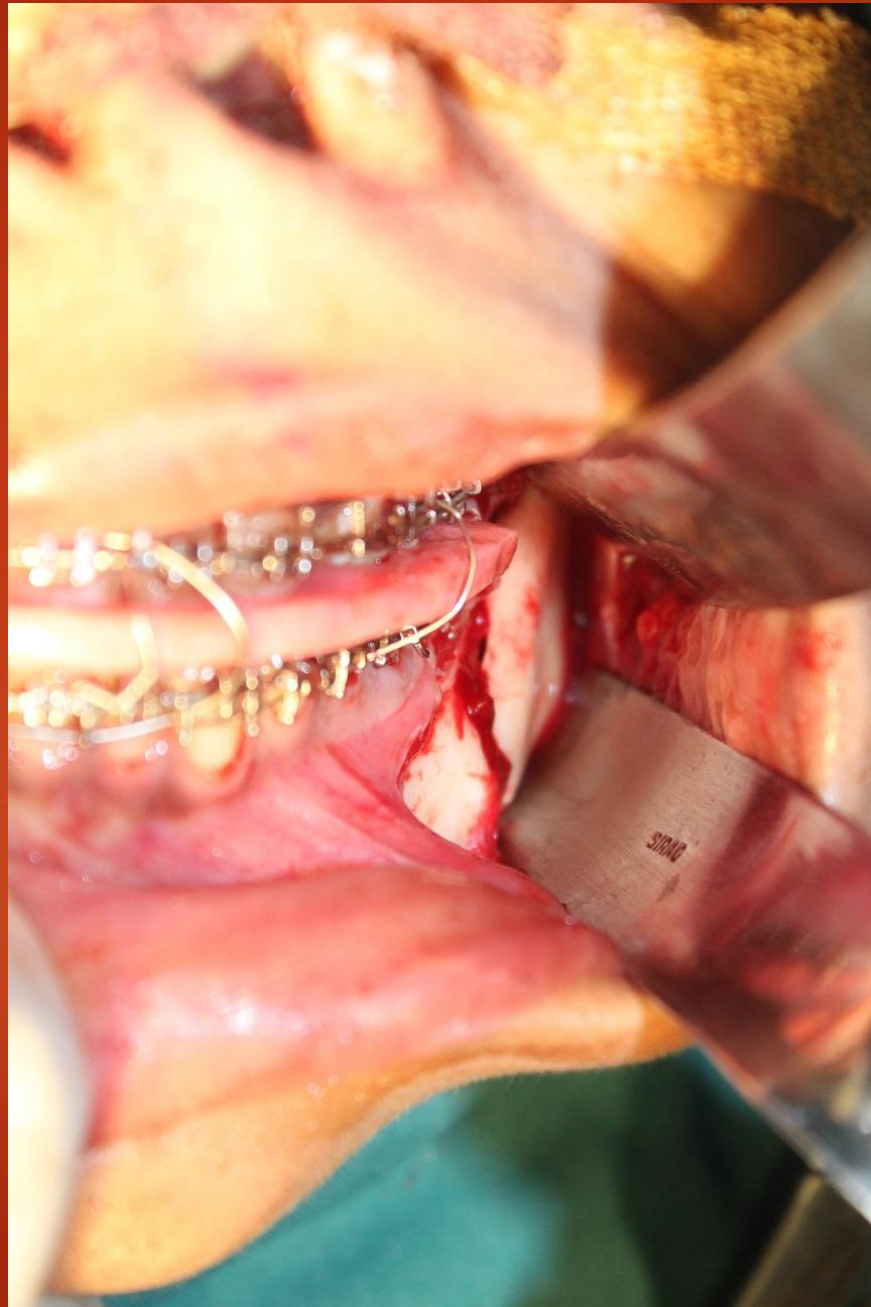


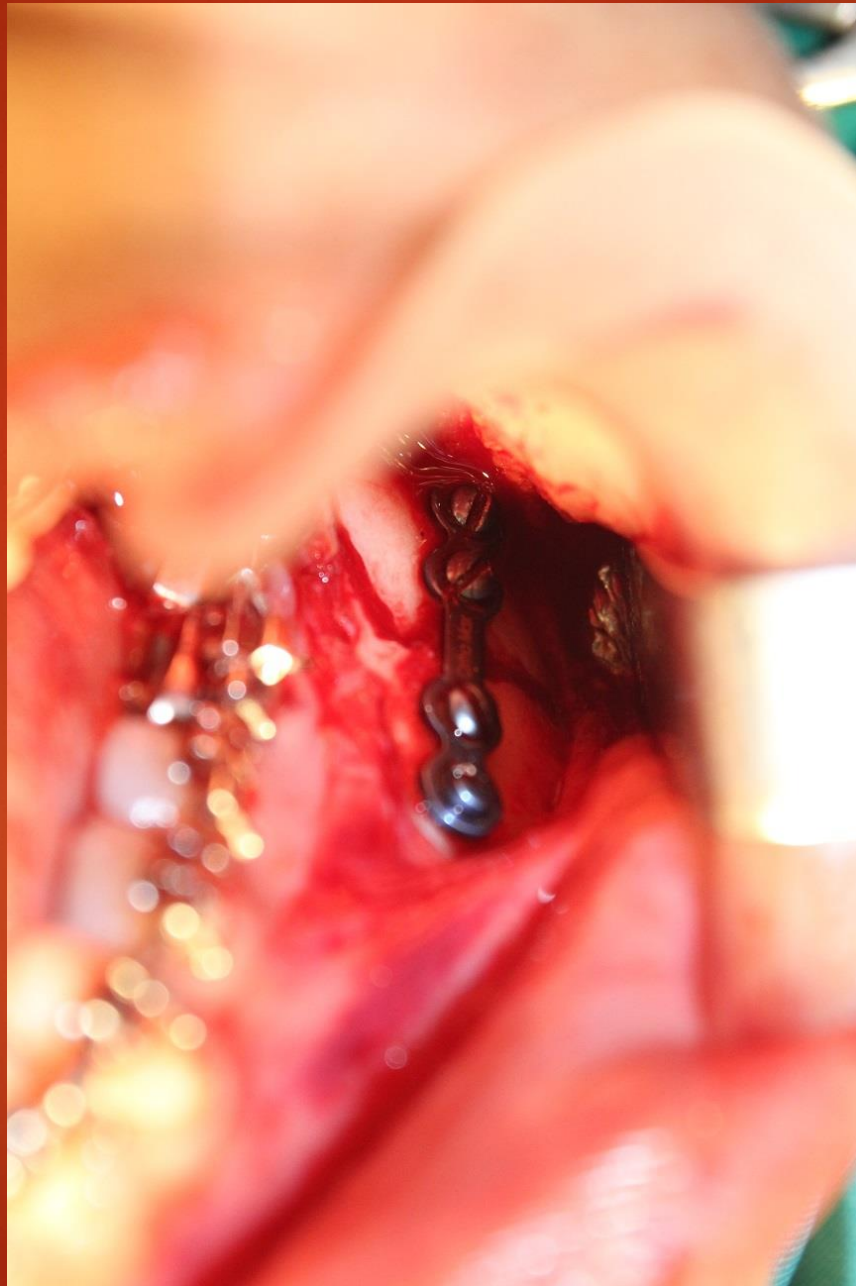






























Thank You