

Treatment of Unrepaired Cleft Palate @ 18 : A Case Report

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An 18-year old girl from Karkala reported with the chief complaint of hole present in mouth since birth with irregularly and forwardly placed upper front teeth. On examination it was observed that the patient had unrepaired cleft of the palate, lip and alveolus. There were no associated syndromes.

Pretreatment Assessment

On EXTRAORAL examination, (figure 1) the patient's cephalic index was mesocephalic and facial type was mesoprosopic. The face was asymmetric with convex profile and straight divergence. The unrestrained growth of the maxilla due to unrepaired cleft palate resulted in protrusive maxilla. The mandible was in line with respect to the cranium, giving a Class II relation of the apical bases. The lips were incompetent with the cleft. The width of the left alae of the nose was increased and the nasal tip was deviated to the right with decreased columella height.



On INTRAORAL examination, (figure 2) all permanent teeth were present (except the third molar and left upper lateral incisor), retained deciduous canine was present in the left maxillary anterior region. The maxillary arch was 'V' shaped and asymmetric with rotated and buccally placed 21. The mandibular arch was 'U' shaped with grossly decayed 36 and 46. The overjet was 20 mm and open bite was 2-3 mm.



Figure 1 : Extraoral Photographs Showing Unilateral Cleft Lip And Palate



Figure 2: Intraoral Photographs

Radiographic Examination
 Pretreatment Orthopantomograph (OPG) and Lateral Cephalogram were made (figure 3). Various cephalometric analysis were done including Steiner's, Down's, Tweed's, McNamara's and others.

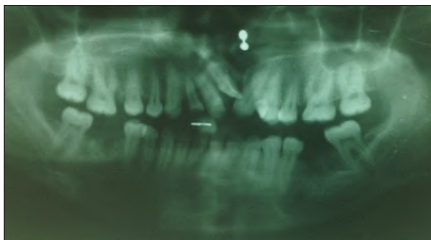


Figure 3: Pretreatment Lateral Cephalogram & OPG

The patient had Class II skeletal base (ANB=7??) due to prognathic maxilla and vertical growth pattern (FMA = 32 ?).

Diagnosis

Non-growing female patient with Class II skeletal base due to prognathic maxilla having unilateral cleft lip and palate (including alveolus) and open bite with grossly malpositioned maxillary anterior teeth.

Treatment Objectives

- * To obtain a harmonious soft tissue and skeletal base relationship.
- * Correction of overjet and open bite.
- * Replacement of missing teeth.

Treatment Plan

- * Palatoplasty
- * Cheiloplasty.
- * Alignment and leveling of arches.
- * Lefort I osteotomy with maxillary setback and down fracture.
- * Endodontic and Prosthodontic consultation for aesthetic and functional

rehabilitation.

- * Finishing and detailing.
- * Speech therapy advised for nasal twang.

Treatment

Palatoplasty was done to close the oro-antral communication (figure 4). 36 and 46 were extracted as they were grossly decayed.

Cheiloplasty was performed (figure 5). The upper and lower arch were strapped up using preadjusted edgewise appliance with slot size 0.022" MBT prescription.

Lefort I osteotomy was performed after the pre surgical orthodontic phase (figure 6).

Upper and lower 0.014" NiTi were engaged for initial leveling and alignment followed by 0.016" NiTi. Subsequent to this upper and lower 0.017" x 0.025" NiTi wires were placed. This was followed by upper and lower 0.019" x 0.025" SS wires.

The Prosthodontists advised to create space for the prosthetic implant in the region of 22. The open coil Spring was placed between 21 and 23 to create space for the same. However, on the reassessment of the concerned area, it was observed that there is decreased amount of alveolar bone in the region and hence it was suggested by the prosthodontists to maintain the retained deciduous in the arch and thereby to avoid the prosthetic replacement.

At present, patient is undergoing speech therapy following which the final finishing and detailing will be done.

Posttreatment Assessment

- * The skeletal base became Class I (ANB = 1 ?).
- * The oro antral communication was closed resulting in better speech.
- * The maxillary and mandibular incisors were retracted.
- * Good vertical control was maintained during the treatment.
- * "Harmonious soft tissue profile was achieved with competent lips.



Figure 4: Post Palatoplasty



Figure 5: Post Cheiloplasty



Figure 6: Lefort I Osteotomy

Relevant Cephalometric Values :

	PRE TREATMENT	POST TREATMENT
SNA	85	80
SNB	78	79
ANB	7	1
Sn - Go - Gn	38	36
N - A - Pog	10	6
N - A	-5	-10
N - B	-15	-13
N - Pog	-17	-16
N - ANS	44	46
ANS - Gn	70	68
Upper Incisor - NF	157	105
Lower Incisor - NP	100	94



Figure 7 : Pre Surgical Intraoral Photographs



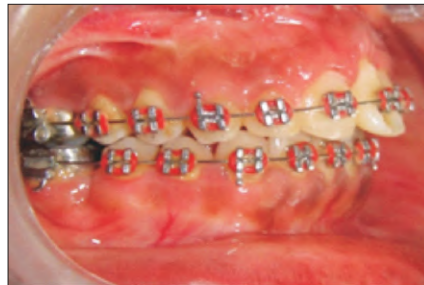


Figure 9 : Photographs showing current status

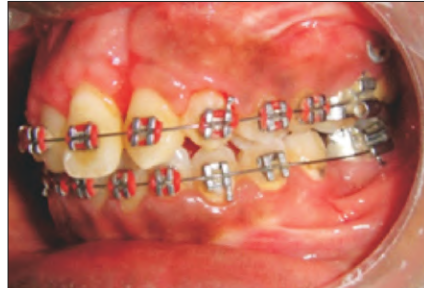


Figure 8a : Post Surgical Intra Oral Photographs

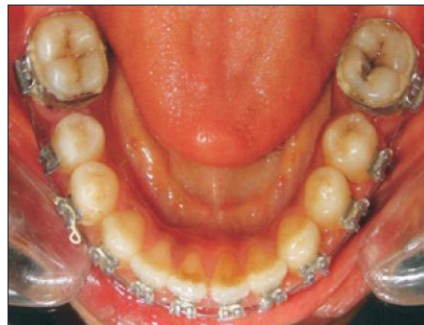


Figure 8b : Post Surgical Lateral Ceph & OPG

