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Provisional Rehabilitation of The Cleft Lip And Palate – A Case Report

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Introduction
Orofacial clefts are one the most common congenital craniofacial malformations which affect children. This anomaly of the middle third of the face is characterized by the presence of oronasal communication, malformation or agenesis of teeth close to the cleft and deficient saggital and transverse growth of maxilla [1].

Many etiological factors, varying from mutation of genes, chromosomal aberrations or integration of genetic and environmental agents contribute to the development of the same. The goal of maxillofacial rehabilitation is not only esthetic and functional but it should also allow for the reintegration of the patient, back into the society with a raised self esteem and confidence. The key to successful treatment is the management of the patient via the multidisciplinary approach.

Provisional restorations are essential in prosthodontic therapy[2]. Although a definitive restoration may be forthcoming, a provisional restoration must satisfy important clinical requirements for both the patient and the dentist [3].

After orthodontic treatment, the proper tooth and arch relationship must be maintained while the treatment results are being refined for a patient who has a cleft lip and palate[1]. A conservative alternative treatment could be conventional fixed or removable prostheses for patients who refuse surgical intervention[4]. For many patients who have cleft palates removable partial denture often is the restoration of choice [5].

The Article describes the rehabilitation of a patient with cleft lip and palate with a provisional modified removable partial denture like an obturator.

Case Report
Patient Evaluation
A 16 year old girl, born with cleft lip and palate, seeking prosthetic evaluation, reported to the department of Prosthodontics and Crown & Bridge, post orthodontic treatment. She underwent cheiloplasty at 7 months of age and palatoplasty at the age of 2 years. Clinical examination of the patient revealed poor oral hygiene .She presented with an inadequately repaired unilateral cleft lip and palate, on the left side with related psychosocial problems[Fig : 1].

Intraoral examination revealed a congenitally missing lateral incisor, with the cleft extending upto one third of the anterior 2/3rds of the hard palate.

The central incisor adjacent to the site of the cleft, exhibited Grade 1 Mobility. Localized gingival inflammation was observed after gentle probing with respect to the teeth adjacent to the cleft site.

Radiographic analysis revealed inadequate alveolar bone and slight widening of the periodontal ligament space with respect to the mesial aspect of the canine.

Treatment Considerations
Prior to the initiation of treatment, all the several options were discussed and explained to the patient and the guardians. They were informed about all the clinical findings, and were given thorough explanation of the advantages and disadvantages of treatment with a modified removable partial denture. An informed consent was obtained for the same.

Prosthesis Design
The prosthetic considerations for the appliance fabrication included:

- Age of the patient
- Retentive orthodontic phase – 6-9 months post treatment
- Bone availability at the defect site
- Maintenance of periodontal health after replacement of the missing lateral incisor.

Clinical procedures
Preliminary Maxillary and mandibular complete-arch impressions were made using irreversible hydrocolloid impression material .Another impression of the complete maxillary arch (including the defect) was made in poly vinyl Sloane.[Fig:2]. Diagnostic casts were fabricated from Type IV dental stone. The temporary denture base was fabricated with auto polymerized clear acrylic resin. The artificial teeth were arranged in wax for trial evaluation along with the Hawley's retainer (labial bow and Adams clasp)

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.The occlusion and position of the prosthetic teeth and the retainer was evaluated intra orally, and the necessary changes were made.

The final provisional restoration was made with heat-cured acrylic resin.

The fit of the provisional restoration was verified on the cast. Then the prosthesis was examined to check if it met the criteria for occlusion, contours, embrasure form and color before being placed in the mouth.[Fig: 3(i),(ii),(iii)]

After placement of the provisional prosthesis, the patient was given necessary oral hygiene instructions .Post operative recall was scheduled for aftercare.

Conclusion

Many cleft lip and palate patients can be only partially rehabilitated regardless of the treatment[6]. Cleft lip and palate patients require the combined skill and guidance of various specialists for their proper rehabilitation. Meticulous care and proper timing is of prime importance to successful treatment, and the treatment should not be postponed so as to result in embarrassment to the patient[7]. An impressive amount of evidence is accumulating in support of the concept that CL (P), in the majority of cases, represents a quasi-continuous variant, or threshold character of multifactorial etiology[8].

The article illustrated the rehabilitation of a patient with unilateral cleft lip and palate defect, which hadn't been closed completely post surgery .The tissue decencies were restored in the maxillary dental arch with the help of modified removable partial denture.

Figures :

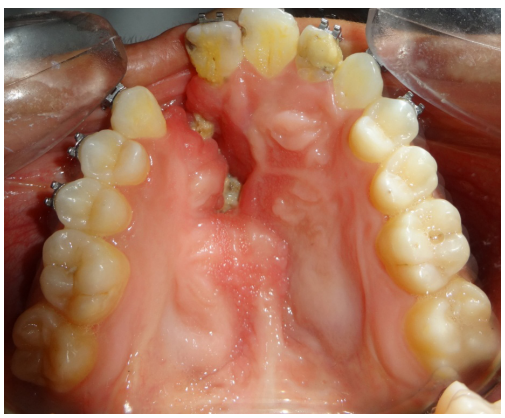

Figure 1

Figure 2

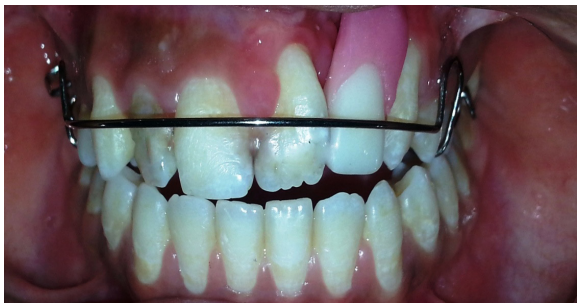

Figure 3 (i)

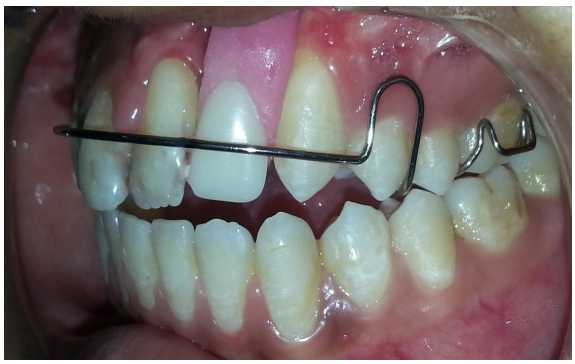

Figure 3 (ii)

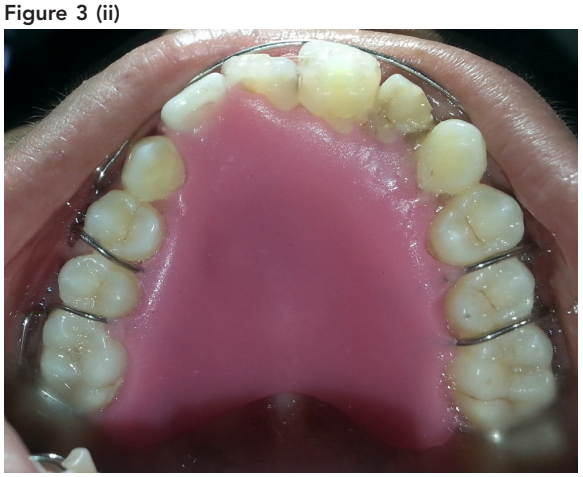

Figure 3 (iii)

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