

Alexandria protocol for complete rehabilitation of cleft palate patients: The Egyptian experience

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Aim: The objective of this work is to review the outcome of a comprehensive protocol for total rehabilitation; functionally and esthetically, of patients with post-cleft palate defects (uni-lateral and bilateral) in the age group 6 years to 18 years.

Study Design: Fifty patients (24 females, 26 males) with post-cleft palate defects, with a history of complete cleft lip, alveolus and palate, (20 patients with bilateral and 30 patients with unilateral) who were treated in our center for (chelio-plasty and palato-plasty). The study was conducted during the period between Jan. 2005 and Dec. 2010 years.

Materials and Methods:

Our Protocol consists of five phases: Phase I : Orthodontic Preparation, Phase II: Alveolar Reconstruction, Phase III: Maxillary & /Or Midface distraction, Phase IV: Chelio-Septo-Rhinoplasty and Phase V: Dental Rehabilitation

The materials Included two groups:

1. First group, 20 patients with history of complete bilateral cleft lip, alveolus, and palate.
2. Second group, 30 patients with a history of unilateral complete cleft lip, alveolus, and palate of the patients treated during the period between 2005 and 2010; 50 alveolar cleft (18 females, 32 males) have been documented. Ages of the patients ranged between 6 and 18 years; the mean age was 8.5 years. All the patients were operated upon for cleft of primary palate (lip and alveolus) at the age of 3-6 months and palatoplasty for secondary palate at the age of 12 to 18 months in other centers, all patients had, dental problems, skeletal malocclusion (class III due to maxillary deficiency), unilateral/or bilateral alveolar defects, oro-nasal fistulas, mal-repaired lips as well as nasal deformities.

Protocol of Treatment:

Phase I: Orthodontic Preparation:

1. Realignment of teeth, maxillary expansion was performed in all patients before the operation.
2. In severe maxillary arch constriction; surgically assisted rapid maxillary expansion was done (16 patients).

Phase II: Alveolar Reconstruction:

By one of two techniques:

1. **Alveolar Bone Grafts:** This is done for patients before and during age of mixed dentitions, (between 6 and 11 years), a; Early secondary alveolar bone graft; before the eruption of lateral incisor, when the root is 1/3 to 2/3 rds formed, (age 5-8 years). b; Classical secondary alveolar bone graft, when the root of canine is 1/3 to 2/3 rds formed; (age 8-11 years).
2. **Trans Alveolar Transport Distraction, (TATD):** Construction of Trans-alveolar Transport Distractor ;A custom made tooth-borne distractor was manufactured for unilateral defect and two for bilateral defects.

Patients Criteria: The age of patients were more than 11 years and with one or more of the followings:

- Wide alveolar cleft
- Full eruption of permanent dentitions
- Soft Tissue deficiency
- Failure of previous bone grafting
- Absent premaxilla.
- Rudimentary premaxilla

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