

# Outcome of Patients with Complete Unilateral Cleft Lip and Palate: 20-years Follow-up of a Treatment Protocol

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## Objective

An analysis of patients with complete unilateral cleft lip and palate who were born in 1994 to 1996 were analysis from single plastic surgeon, orthodontist and speech pathologist.

## Methods

A retrospective review was undertaken by going through the electronic medical charts of patients with complete cleft lip and palate (either right or left side cleft), who were born between 1994 and 1996 at Chang Gung Memorial Hospital. Data were collected by went through patients' medical, dental and surgical records.

## Results

There are total of 72 patients who had met our inclusion criteria were analyzed, 32 were male and 40 were females. The average age for the patients was 20.9 years old, range from 20 to 22 years old. There were 50 patients with left complete cleft lip/palate and 22 patients with right complete cleft lip/palate.

Eighty-three percent of patients had one-stage lip repair and 17% of patients had two-stage lip repair. Twelve patients (17%) had Millard rotation-advancement flap with adhesion for lip repair and 60 patients (83%) had Millard rotation-advancement flap without adhesion for lip repair. All patients had one-stage two-flap palatoplasty in average of 12.3 months old with no oronasal fistula. Forty-one patients (57%) preferred to have lip/nose revision at preschool year. After patients were completely grown up and had orthodontic treatment with or without orthognathic surgeries, 20 patients (28%) had final lip/nose revision. There are total of 14 patients (19%) had velopharyngeal insufficiency (VPI) surgeries at preschool age; Furlow palatoplasty (FP) was used in 11 patients and pharyngeal flap (PF) was used in 3 patients. Twelve patients (33%) had VPI surgery at time of ABG, 6 patients with FP and 6 patients with PF. Four patients (6%) had VPI surgery after 16 years old; 3 with FP and one patient with PF. However, 5 patients had repeated VPI surgeries after evaluated by speech pathologist. There were 68 patients (94%) had alveolar bone graft (ABG) in average of 9.7 years old and 4 patients had no ABG treatment. Among these 68 patients who had ABG, only 8 patients (5.5%) had pre-ABG orthodontic treatment before ABG procedure, 60 patients (88.2%) had no orthodontic treatment before ABG. After permanent teeth were all erupted, twenty patients (27.8%) did not receive any orthodontic treatment, 25 patients (34.7%) had orthodontic treatment only and 27 patients (37.5%) had orthodontic treatment combined with orthognathic surgery (OGS).

## Conclusion

Management of patients with complete unilateral cleft lip and palate are still under debate. Evaluation of patients who were born 20 years ago and treatment protocols have change through out these years such as NAM and 3D software were added in for better result of the patients who were born with cleft.