



The 9th International Congress
on Cleft Palate and Related
Craniofacial Anomalies

PROGRAMME COMPENDIUM

Welcome to
The 9th International Congress
on Cleft Palate and
Related Craniofacial Anomalies
25–29 June, 2001

PROGRAMME

and

ABSTRACTS

Session: **Platform 25 - National records and organisation of cleft treatment**
Chairman: J Sandy - Co-chairman: G Landa

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Date: 2001-06-27
Time: 09:15- 10:45

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LONG-TERM SPEECH EVALUATION AND DENTAL ARCH SHAPE AFTER PALATOPLASTY USING THE SUPRAPERIOSTEAL TECHNIQUE
Shizuyo, Itoh; Kohama, G.; Yamaguchi, A.; Noguchi, M.; Suda, Y.

Long-term speech evaluation and dental arch shape after palatoplasty using the suprapariosteal technique.

Shizuyo Itoh*, Ph.D., Gen-iku Kohama, D.D.S., Ph.D., Akira Yamaguchi, D.D.S., Ph.D., Makoto Noguchi, D.D.S., Ph.D., Yoshiyuki Suda, D.D.S., Ph.D.

Dept. of Oral Surgery, Sapporo Medical University School of Medicine, Japan 060-0061.

Purpose: Palatoplasty by the Kohama suprapariosteal flap technique (SP) has been used in our clinic since 1980, replacing the formerly used mucoperiosteal flap technique (MP). The aim of the study was to evaluate dental upper arch shape and speech of UCLP-, and ICP-patients after palatal repair according to the SP-technique or by the use of the MP-technique.

Methods: A number of 62 patients (29ICP, 33UCLP) operated by the use of SP-technique, and 47 patients (23ICP, 24UCLP) operated according to MP-technique, studied for two to four years (childhood) and six to eleven years (school-age) after palatoplasty.

Results: 1. The dental arch shape was categorized in a U-type (good shape) or in a V-type (narrow shape). In ICP-children, a U-type was observed in 26 cases of the MP-group (83%). In UCLP-patients, a U-type observed in 28 cases of the SP-group (85%), and only in 8 of the MP-group (33%).

2. In the SP-group, normal speech was observed in 25 ICP-children (86%) for childhood and in all ICP-patients (100%) for school-age. In UCLP-children, normal speech was observed in 23 cases (70%) for childhood and 32 cases (97%) for school-age.

3. In the MP-group, normal speech was observed in 18 ICP-children (78%) for children and in 19 cases (83%) for school-age. In UCLP-children, normal speech was observed in 12 cases (50%) for childhood, and 18 cases (75%) for school-age.

4. Palatalized articulation was the most common type of misarticulation for childhood of both the SP- and MP-group of UCLP.

5. In both surgical groups, most of the patient with normal speech had U-type. However, in patients who had developed palatalized articulation, the V-type dental arch was demonstrated in many cases of the SP- and MP-groups, and change in D1-D width before and after palatoplasty tended to be large in both groups. This seems attributable to the narrow dental arch shape and maxillary deformity.

Conclusion: It can be concluded that the suprapariosteal technique results in a more normal arch form and in a more normal speech pattern than the mucoperiosteal technique.

Presenting author: Itoh Shizuyo, JAPAN

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COMPARISON OF DENTOALVEOLAR MORPHOLOGY IN TWINS WITH BILATERAL CLEFT LIP AND PALATE
Aoyama, Ryosuke; Ohkubo, F.; Hirakawa, T.; Kanzaki, A.; Wada, K.; Onizuka, T.

Cleft lip and palate is one of the most common anomalies in Japan. And most cases occur as an isolated birth defect. Although genetic and environment factors have been recognized to be associated with cleft lip and palate, the etiology remains unclear for the majority of the cases. So twin studies remain a unique approach for understanding hereditary and environmental factors in growth. The genetic constitution of monozygous twins is identical, and any variation between them will be due to environmental factors. In this study, the twin boys with bilateral complete cleft lip and palate did not receive any presurgical orthopedic treatment. Elder boy's lip closure was performed at 4 months, younger boy's lip closure was performed at 4 months, and 7 months. And palate closure was done at 1 year using different method. Dental cast analysis indicated that the shape and sizes of the alveolar and dental arches in the operated subjects were affected in each case. These morphologic differences between the twins indicate that each surgical closure of clefts may have considerable effects on dentoalveolar growth in cleft lip and palate patients.

Presenting author: Ryosuke Aoyama, JAPAN

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THE PREVALENCE OF THE UPPER CERVICAL VERTEBRAE IN PATIENTS WITH CLEFT LIP AND PALATE
Ugar, Dilek; Semb, G.

Purpose: The purpose of this study was to examine the prevalence of the cervical vertebral anomalies in patients with cleft lip and/or palate and make a comparison with a non-cleft group. Material and Method: This retrospective comparison was performed as an archive review in the Dental Unit, Department of Plastic Surgery, National Hospital and at the Department of Orthodontics, Faculty of Dentistry, University of Oslo, Norway. Six hundred and eleven subjects (334 males, 277 females) with three different cleft subtypes at 6 years or older and 264 non-cleft subjects (121 males, 143 females) were included in this study. The cleft subgroups were as follows: 242 subjects with cleft palate only (CPO), 153 with bilateral complete cleft lip and palate (BCLP) and 216 with unilateral complete cleft lip and palate (UCLP). Their lateral cephalometric radiographs were studied for cervical vertebral anomalies and categorized into 1) posterior arch deficiencies 2) fusions. Results: In the total cleft sample 111 subjects (18.2%) had cervical vertebral anomalies, of these 10 subjects had more than one anomaly. Posterior arch deficiency was found in 7.7% and fusions in 12.1%. In the non-cleft sample 9.1% had cervical vertebral anomalies, 5% were posterior arch deficiency and 4.1% fusions. When the cleft sample was divided into the 3 cleft subtypes the prevalence of cervical vertebral anomalies was 25.6% in the CPO group, 16.3% in the BCLP group and 11.1% in the UCLP group. Differences were statistically significant between the CPO and the non-cleft group for both posterior arch deficiency and fusion anomalies ($p < 0.01$). Conclusion: Cervical vertebral anomalies occur more frequently in individuals with clefts as compared to non-clefts. This was statistically significant for the CPO group.

Presenting author: Dilek Ugar, TURKEY

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DENTAL OCCLUSION AT 5 YEARS OF AGE AFTER TWO DIFFERENT METHODS OF CLEFT PALATE REPAIR
Karsten, Agneta; Larson, M.; Larson, O.

PURPOSE: The aim of this study was to compare the Veau-Wardill-Kilner technique with a minimal incision technique regarding surgical complications and dental occlusion at 5 years of age.

METHODS: A consecutive series of 129 children born with isolated cleft palate were studied. According to the surgical procedure performed the material was divided into two groups. Each of these groups was then divided into two subgroups depending on the sagittal extension of the cleft.

The following variables were collected from the medical records: time for surgery, blood loss, complications in the immediate postoperative period, frequency of fistulas. Dental casts taken at 5.3 ± 1 year were studied for evaluating the occlusion. The following variables were studied: the sagittal relations, the transversal relations, the vertical relations, the structure of the palatal mucosa, the height of the palatal vault.

RESULTS: Statistically significant less perioperative bleeding and less amount of scar tissue in the palatal mucosa was found in the groups operated with the minimal incision technique. No significant differences were found regarding the frequency of fistulas. Regarding dental conclusion a statistically significant better maxillary development was found in the transversal relation for the groups operated with the minimal incision technique. No significant differences were found regarding the sagittal and the vertical relations.

CONCLUSION: The minimal incision technique gives less amount of scar tissue in the palatal mucosa and better conditions for a normal occlusion at 5 years of age.

Presenting author: Agneta Karsten, SWEDEN