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**Updated Reviews – May 2015**

*Sweet tasting solutions for reduction of needle-related procedural pain in children aged one to 16 years*

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**Cleft Palate-Craniofacial Journal – Latest Issue**

*Cleft Palate-Craniofacial Journal*

ISSN: 1055-6656 Latest issue available from Allen Press in [Journals@Ovid (Athens Authorization)](#)

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**Titles highlighted in green may be of particular interest to Speech and Language Therapists**

**Titles highlighted in orange may be of particular interest to Clinical Psychologists**

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1. Title: A modified Mohler technique for patients with unilateral cleft lip based on geometric principles-A primary report.
   **Citation:** Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery, Jun 2015, vol. 43, no. 5, p. 663-670 (June 2015)
   **Author(s):** Li, Liqi, Liao, Lishu, Zhong, Yuxiang, Li, Yuangui, Xiang, Li, Li, Wanshan
   **Abstract:** The Mohler technique is one of the most popular methods to repair unilateral cleft lip (UCL) among the modified Millard methods, but it is still imperfect. We successfully designed a modified Mohler method based on geometric principles and observed its clinical effect. Photogrammetry was performed in 56 patients who underwent UCL repair with the new technique. The symmetry ratios were assessed for sn-cphi, cphi-sbal, ch-sbal, ch-cphi, and vh preoperatively and 1 week after surgery, and were also compared with values in healthy control individuals. Preoperatively, all distances on the cleft side were shorter to different degrees. One week after surgery, results showed well-healed wounds with full, symmetric, and continuous vermillion. On the cleft side, the sn-cphi was 6.13% longer than the non-cleft, and the others were shorter (cphi-sbal: 5.904%; ch-sbal: 1.760%; ch-cphi: 6.234%). The symmetry ratios had differences of significance between preoperative values and those 1 week after surgery (p = 0.000, respectively). Moreover, the vermilion height on the cleft side was 1.026% thicker. When compared with the matched control group, with the exception of SRcphi-sbal (p = 0.072) and SRch-sbal (p = 0.139), there were significant differences (p = 0.000, respectively). All distances in the matched control group were not absolutely symmetric. The modified Mohler technique seems widely applicable, marking accurate, and less flexible. Copyright © 2015 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.
   **Source:** Medline

2. Title: A novel active intraoral appliance for presurgical orthopaedic treatment in patients with complete bilateral cleft lip and palate
   **Citation:** Journal of Plastic, Reconstructive and Aesthetic Surgery, May 2015, vol./is. 68/5(632-637), 1748-6815;1878-0539 (01 May 2015)
   **Author(s):** Kiya K., Oyama T., Sone Y., Ishii N., Hosokawa K.
   **Language:** English
   **Abstract:** Background Management of the protruding/deviated premaxilla in patients with complete bilateral cleft lip and palate is a challenging problem for surgeons and orthodontists. Various passive and active methods have been developed for the presurgical orthopaedic treatment. However, most of these treatments are complicated and laborious for the patient's parents and clinicians. Here, we describe our original active intraoral appliance comprising two components, that is, the premaxillary and palatine process plates, connected with two elastic chains, and we assess its therapeutic efficacy. Patients and methods We retrospectively evaluated 15 patients treated using this appliance during 2006-2012, followed up for an average of 60.3 months (range, 18-97 months). We analysed the cleft widths and maxillary size, obtained pretreatment, post-treatment and pre-palatoplasty. Results Cleft widths
and premaxillary protrusion were significantly decreased post treatment; however, the transverse dimensions were not significantly altered. In all cases, the protruding/deviated premaxilla was set into a suitable position within 1 month, and we could perform one-stage cheiloplasty using the modified Mulliken method with low tension.

Conclusion Our appliance is technically simple to use, less invasive to the skin and bone and cost-effective, with reliable and predictable outcomes. In the follow-up period, we observed no detrimental growth of the maxilla or dentition. Therefore, we consider our appliance to be useful for application in presurgical orthopaedic treatments of complete bilateral cleft lip and palate.

**Publication type:** Journal: Article  
**Source:** EMBASE  
**Full text:** Available JOURNAL OF PLASTIC, RECONSTRUCTIVE & AESTHETIC SURGERY (formerly BRITISH JOURNAL OF PLASTIC SURGERY) at Journal of Plastic, Reconstructive and Aesthetic Surgery  
**Full text:** Available JOURNAL OF PLASTIC, RECONSTRUCTIVE & AESTHETIC SURGERY (formerly BRITISH JOURNAL OF PLASTIC SURGERY) at Salisbury District Hospital Healthcare Library

3. Title: A systematic review comparing furlow double-opposing z-plasty and straight-line intravelar veloplasty methods of cleft palate repair.  
**Citation:** Plastic and reconstructive surgery, May 2015, vol. 135, no. 5, p. 927e (May 2015)  
**Author(s):** Nardini, Gil, Flores, Roberto L  
**Source:** Medline  
**Full text:** Available Ovid at Plastic and Reconstructive Surgery  
**Full text:** Available Ovid at Plastic and Reconstructive Surgery

4. Title: An outcome study of a 2-flap pushback palatoplasty used in the treatment of wide cleft palates.  
**Citation:** The Journal of craniofacial surgery, May 2015, vol. 26, no. 3, p. 620-624 (May 2015)  
**Author(s):** Lin, Kant Y, Black, Jonathan S, Wang, Jessica S, Kerpelman, Jocelyn, Ho, Thuy-Van Tina, Borowitz, Kathleen  
**Abstract:** Cleft palate remains a common congenital deformity. The wide cleft palate in particular presents a unique challenge when attempting to restore a competent velopharyngeal mechanism. We present an outcome study of a single surgeon's experience using a modified surgical technique designed to specifically address the wide cleft palate. The surgical technique consisted of a 2-flap pushback palatoplasty without nasal mucosa closure combined with an end-to-end intravelar veloplasty and was used in cleft palates greater than or equal to 10 mm in width. A retrospective, longitudinal outcome study from chart review was then performed where age at surgery, sex, Veau classification of the cleft type, and follow-up length were recorded for each patient. Postsurgery speech outcomes were assessed by standardized speech evaluation performed by a speech language pathologist, and the presence and location of unplanned oronasal fistulas were recorded. Our study revealed an overall incidence of velopharyngeal insufficiency (VPI) of 10.8% and an unplanned symptomatic fistula rate of 16.8%. There was a significant correlation between the Veau classification of the cleft type with the incidence of both VPI and the occurrence of an unplanned oronasal fistula. Application of this surgical technique, specifically to wider cleft palates, resulted in VPI and fistula rates comparable to rates reported with other techniques used in clefts of all widths. Additional information regarding subsequent growth disturbances of the craniofacial skeleton in these patients is currently being collected.  
**Source:** Medline

5. Title: An overview of indices used to measure treatment effectiveness in patients with cleft lip and palate  
**Citation:** Malaysian Journal of Medical Sciences, 2015, vol./is. 22/1(4-11), 1394-195X;2180-4303 (2015)  
**Author(s):** Haque S., Alam M.K., Arshad A.I.  
**Language:** English  
**Abstract:** In the contemporary era, the demand for orthodontic treatment is ever rising. Orthodontic treatment duration can range from a year to a few years. Our aim is to assess the available techniques of categorising treatment effectiveness in patients with cleft lip and palate (CLP) and to study their effect on improvement of treatment outcomes. The electronic databases including Medline-PUBMED, Science Direct, and ISI Web of Knowledge were searched from 1987 to 2013, and 40 311 relevant articles were found. Of these, we identified 22 articles including original articles as well as literature reviews. The different parameters and indices that are applied to speed-up orthodontic treatment outcomes in patients with CLP were identified as the GOSLON Yardstick, 5-year-old index, EUROCRAN index, Huddart Bodenham system, modified Huddart Bodenham system, GOAL Yardstick and, Bauru-Bilateral Cleft Lip and Palate Yardstick. This overview can create better awareness regarding the uses, advantages, and disadvantages of the different indices. It can enable better assessment and provide the impetus needed for a sustained upgrade in the standards of care for CLP in daily orthodontics.  
**Publication type:** Journal: Review
6. Title: Application of ultrasound imaging of upper lip orbicularis oris muscle
Citation: International Journal of Clinical and Experimental Medicine, May 2015, vol./is. 9/5(UC04-UC06), 2249-782X;0973-709X (01 May 2015)
Language: English
Abstract: In this study, we aim to understand the morphology and structure of upper lip orbicularis oris muscle, and to provide clinical evidence for evaluating the effect of repair operation in cleft lip. Subjects included 106 healthy people and 36 postoperative patients of unilateral cleft lip. The upper lip orbicularis oris muscle was scanned using ultrasound in natural closure and pout states. Our results showed that the hierarchical structure of upper lip tissue was demonstrated clearly in ultrasonic images. After reconstruction of unilateral cleft lip, the left and right philtrum columns were still obviously asymmetric, their radian displayed clearly and showed better continuity. In the place of cleft lip side equivalent to philtrum columns, orbicularis oris muscle showed discontinuity and unclear hierarchical structure, which was replaced by hypertrophic scar tissue. The superficial layer would become thicker when pouting. In reconstructed unilateral cleft lip, the superficial layer was thinner than that of healthy controls. In normal upper lip orbicularis oris muscle, the superficial layer thickness was no less than 2.89 mm in philtrum dimple and no less than 3.92 mm in philtrum column, and the deep layer thickness was no less less the 1.12 mm. Otherwise, the layer thickness less than above reference values may be considered as diagnostic criteria for dysplasia of upper lip orbicularis oris muscle. In conclusions, ultrasound imaging is able to clearly show the hierarchical structure of upper lip orbicularis oris muscle, and will be beneficial in guiding the upper lip repair and reconstruction surgery.
Publication type: Journal: Article
Source: EMBASE

7. Title: Bilateral infraorbital nerve block versus intravenous pentazocine: A comparative study on post-operative pain relief following cleft lip surgery
Citation: Journal of Clinical and Diagnostic Research, May 2015, vol./is. 9/5(UC04-UC06), 2249-782X;0973-709X (01 May 2015)
Author(s): Grewal G., Garg K., Grewal A.
Language: English
Abstract: Background and Objectives: Infra orbital nerve block is utilized for postoperative pain control in children undergoing cleft lip repair. This study was conducted to compare the effectiveness, advantages and disadvantages of infra orbital nerve block and opioids for postoperative pain relief following cheiloplasty. Materials and Methods: Sixty paediatric patients aged 3 months - 13 years undergoing cheiloplasty were selected by simple random sampling and were divided into two groups. All the children received standardized premedication with midazolam, were operated upon under general anaesthesia and the block was performed at the end of surgery before reversal. Group B patients were administered bilateral infra orbital nerve block with 0.25% Bupivacaine (upto 2 mg/kg). Group O patients received Pentazocine 0.5 mg/kg IV. Postoperatively, the heart rate and respiratory rates were recorded every 15 minutes for the first 60 minutes, half hourly till 4 hours and then at 12 and 24 hours. Behavioural assessment for pain/discomfort was done at intervals of 1/2, 1, 2, 3, 4, 12 and 24 hours. Need for supplementary analgesics and duration between the administration of block/opioid and the first dose of supplementary analgesics were noted. Side effects such as nausea and vomiting, pruritus, respiratory depression and bradycardia during each of these periods were noted. Results: Both the groups were comparable for age, sex, weight and operative time with no statistical difference. The mean duration of analgesia for infra orbital nerve block was 357.5 minutes i.e. 5 hours 58 minutes and that for opioid was 231 minutes i.e. 3 hours 51 minutes which was significantly lower than the hours of analgesia provided by the block. Further, at the 4<sup>th</sup> hour, 76.6% of the patients in Group O required supplementary analgesics, in contrast to only 16.6% in Group B. The incidence of nausea and vomiting and pruritus was also higher in Group O. Conclusion: The results indicate that bilateral infra orbital nerve block provides effective analgesia in the postoperative period, lasting for 6 hours in comparison to 31/2 - 4 hours following the administration of intravenous Pentazocine, with no major untoward effects.
Publication type: Journal: Article
Source: EMBASE

8. Title: Cholesteatoma risk in 8,593 orofacial cleft cases and 6,989 siblings: A nationwide study
Citation: ProQuest at Malaysian Journal of Medical Sciences, The
Source: EMBASE
Full text: Available ProQuest at Malaysian Journal of Medical Sciences, The

13. Title: Application of ultrasound imaging of upper lip orbicularis oris muscle
Citation: International Journal of Clinical and Experimental Medicine, May 2015, vol./is. 9/5(UC04-UC06), 2249-782X;0973-709X (01 May 2015)
Language: English
Abstract: In this study, we aim to understand the morphology and structure of upper lip orbicularis oris muscle, and to provide clinical evidence for evaluating the effect of repair operation in cleft lip. Subjects included 106 healthy people and 36 postoperative patients of unilateral cleft lip. The upper lip orbicularis oris muscle was scanned using ultrasound in natural closure and pout states. Our results showed that the hierarchical structure of upper lip tissue was demonstrated clearly in ultrasonic images. After reconstruction of unilateral cleft lip, the left and right philtrum columns were still obviously asymmetric, their radian displayed clearly and showed better continuity. In the place of cleft lip side equivalent to philtrum columns, orbicularis oris muscle showed discontinuity and unclear hierarchical structure, which was replaced by hypertrophic scar tissue. The superficial layer would become thicker when pouting. In reconstructed unilateral cleft lip, the superficial layer was thinner than that of healthy controls. In normal upper lip orbicularis oris muscle, the superficial layer thickness was no less than 2.89 mm in philtrum dimple and no less than 3.92 mm in philtrum column, and the deep layer thickness was no less less the 1.12 mm. Otherwise, the layer thickness less than above reference values may be considered as diagnostic criteria for dysplasia of upper lip orbicularis oris muscle. In conclusions, ultrasound imaging is able to clearly show the hierarchical structure of upper lip orbicularis oris muscle, and will be beneficial in guiding the upper lip repair and reconstruction surgery.
Publication type: Journal: Article
Source: EMBASE
**Abstract:** Objectives/Hypothesis To estimate the risk of surgically treated middle ear cholesteatoma in individuals with a nonsyndromic orofacial cleft and in their siblings compared with the general population. Study Design Historical cohort study. Methods Using the unique civil registration number for linkage, data from three national registers were used for the Danish 1936-2009 birth cohorts. Hazard ratios (HRs) were estimated with Cox regression analyses using age as the underlying time variable. Individuals were followed from January 1, 1977 until time of surgically treated cholesteatoma, and censored at emigration, death, or end of follow-up (December 31, 2010). Results A total of 8,593 individuals with nonsyndromic orofacial cleft and 6,989 siblings were identified, undergoing 201 and 21 first-time cholesteatoma surgeries, respectively. A 5% random sample of the Danish population comprising 249,708 persons without an orofacial cleft was created, and 175,724 siblings to these persons were identified. These controls underwent 485 and 332 first-time cholesteatoma surgeries, respectively. For individuals with cleft lip and palate the HR for cholesteatoma surgery was 14 (95% confidence interval [CI], 12-18) and for individuals with cleft palate the HR was 20 (95% CI, 16-24) when compared with the random sample. In siblings of individuals with cleft palate, the HR for cholesteatoma surgery was 2.1 (95% CI, 1.1-4.1) when compared with siblings of the random sample. Conclusions A 20-fold increase in the risk of cholesteatoma was found in individuals with cleft palate, whereas cleft lip did not pose a risk of cholesteatoma. Furthermore, the study indicates an increased risk of cholesteatoma in unaffected siblings of individuals with cleft palate.

**Publication type:** Journal: Conference Paper

**Source:** EMBASE
the palate does not elongate during the V-Y pushback technique, as expected. However, rotational palatoplasty elongates the soft palate.

Publication type: Journal: Article
Source: EMBASE

11. Title: Comprehensive treatment for an adult with bilateral cleft lip and palate.
Citation: American journal of orthodontics and dentofacial orthopedics : official publication of the American Association of Orthodontists, its constituent societies, and the American Board of Orthodontics, Jun 2015, vol. 147, no. 6, p. 643. (June 2015)
Author(s): Jiang, Yuanyuan, Ma, Qiaoling, Li, Huang
Source: Medline

12. Title: Dependence of columella development on the technique used for primary cleft lip closure.
Citation: Oral and maxillofacial surgery, Jun 2015, vol. 19, no. 2, p. 165-175 (June 2015)
Author(s): Yildirim, Vedat, Kaiser, Julia, Hemprich, Alexander, Winter, Karsten, Pausch, Niels Christian
Abstract: Primary cleft lip closure can be achieved by use of different types of surgery. The procedures of Millard, Veau, and Delaire are among the techniques most frequently performed worldwide. The factors which affect development of the columella have not been studied, however. University Hospital of Leipzig, Germany, Department of Oral, Cranio-maxillofacial and Facial Plastic Surgery. In a comparative, retrospective, non-randomised study, we obtained anthropometric details from photographs of 120 unilateral and bilateral cleft patients after cleft lip closure by use of the techniques of Millard or Veau (n = 60) and Delaire (n = 60). Length and shape of the columella was assessed twice-first at the age of 10 months and again at the age of 10 years. Anthropometric characteristics of columella morphology and development were compared between the two groups. At the age of 10 months, the ratio of nasal height to width (interalar distance) was significantly different for unilateral and bilateral cases, and results were better for the Delaire groups (p = 0.001 unilateral and p > 0.001 bilateral). This effect was no longer apparent at 10-year follow up. Another index which tended to indicate better results in the Delaire groups was the nasal width index. In the summary of the anthropometric values investigated, however, differences between the Millard or Veau group and the Delaire group were marginal. Cleft lip closure by the technique of Millard for unilateral cleft lips and of Veau for bilateral cases is neither better nor worse than Delaire cheiloplasty for unilateral and bilateral clefts.
Source: Medline

13. Title: Effectiveness and safety of autologous fat grafting to the soft palate alone.
Citation: Annals of plastic surgery, Jun 2015, vol. 74 Suppl 4, p. S190. (June 2015)
Author(s): Boneti, Cristiano, Ray, Peter D, Macklem, Elizabeth B, Kohanzadeh, Som, de la Torre, Jorge, Grant, John H
Abstract: Posterior pharyngeal augmentation is an accepted method of treating velopharyngeal insufficiency (VPI). Techniques using autologous fat harvest, preparation, and grafting are well described. Based on the complications from retropharyngeal injection, we performed augmentation of the nasal surface of the palate to reduce hypernasality with decreased risks. After Institutional Review Board approval, a chart review from 2010 to 2013 identified 46 patients with cleft palate, subjective and nasoendoscopic evidence of VPI treated with autologous fat grafting to the soft palate. Speech evaluation of velopharyngeal function was compared before and after autologous fat grafting. A total of 61 autologous fat grafting procedures were performed in 46 patients. The average age of the study population is 5.59 ± 2.05 years. The majority underwent a single procedure (32/46 or 69.6%), 13 of 46 patients (28.2%) had 2 fat grafting procedures and only 1 patient (2.2%) had 3 fat grafting procedures. The fat was injected primarily in the soft palate. The recorded volume of fat grafted averaged 2.4 ± 1.1 mL. Average operative time was 39 ± 12.55 minutes. There were no local or donor site complications. Four patients were lost to follow-up. Of 34 patients with adequate speech follow-up, including Pittsburgh Weighted Speech Scale (PWSS) assessment, the average preoperative score of 8.17 ± 3.59 was reduced to 5.17 ± 3.14 postoperatively. Although 26 of 34 patients (76.5%) had an improvement in their PWSS score, only 13 of 34 patients (38.23%) saw an improvement in their PWSS category. Autologous fat grafting to the soft palate is a safe operation with minimal risks. Speech outcomes are subjectively enhanced in the majority of patients, with a full PWSS category improvement seen in 40% of the cases. Patient selection criteria to optimize results are provided.
Source: Medline
Full text: Available Annals of plastic surgery at Annals of Plastic Surgery

14. Title: Esthetic, functional, and everyday life assessment of individuals with cleft lip and/or palate
Citation: BioMed Research International, 2015, vol./is. 2015/, 2314-6133;2314-6141 (2015)
1.1. According to a specific CL/P type, increased clip lip and palate risk and cleft palate risk were found (OR = 1.38; 95% CI 1.01-1.93; P = 0.042). In conclusion, the present meta-analysis found that the association between this polymorphism and CL/P risk (OR = 1.52; 95% CI 1.14-2.02; P = 0.004). However, no significant association was found between this his polymorphism and CL/P risk in African and Hispanic populations. The transforming growth factor alpha (TGFA) Taq I polymorphism has been indicated to be correlated with cleft lip with or without cleft palate (CL/P) susceptibility, but study results are still debatable. Thus, a meta-analysis was conducted. We conducted a comprehensive search of Embase, Ovid, Web of Science, the Cochrane database, PubMed, the Chinese Biomedical Literature Database (CBM-disc, 1979-2014), the database of National Knowledge Infrastructure (CNKI, 1979-2014) and the full paper database of Chinese Science and Technology of Chongqing (VIP, 1989-2014) to identify suitable studies. There were 18 studies suitable for this meta-analysis, involving a total of 3135 cases and 3575 controls. Significantly increased CL/P risk was observed (OR = 1.49; 95% CI 1.17-1.89; P = 0.001). In subgroup analyses stratified by ethnicity, there was evidence in the Caucasian population for an association between this polymorphism and CL/P risk (OR = 1.52; 95% CI 1.14-2.02; P = 0.004). However, no significant association was found between this his polymorphism and CL/P risk in African and Hispanic populations. According to a specific CL/P type, increased clip lip and palate risk and cleft palate risk were found (OR = 1.38; 95% CI 1.10-1.73; P = 0.005; OR = 1.29; 95% CI 1.01-1.66; P = 0.042). In conclusion, the present meta-analysis found that the...
TGFA Taq I polymorphism may be associated with CL/P susceptibility.

**Publication type:** Journal: Article

**Source:** EMBASE

**Full text:** Available *International Journal of Clinical and Experimental Medicine* at International Journal of Clinical and Experimental Medicine

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**17.** Title: Prevalence, demographics, and complications of cleft palate surgery

**Citation:** International Journal of Pediatric Otorhinolaryngology, June 2015, vol./is. 79/6(803-807), 0165-5876;1872-8464 (01 Jun 2015)

**Author(s):** Mahboubi H., Truong A., Pham N.S.

**Language:** English

**Abstract:** Introduction: Current published data on the demographics of cleft lip and palate is sparse and differs intranationally in reported incidence, demographics, and complication rates, making accurate local data both valuable and useful. We investigate the prevalence, demographics, and complications of cleft palate correction surgery in the inpatient setting over a 15-year period. Methods: A retrospective review of The California Hospital Discharge Data sets of all pediatric patients who underwent cleft palate repair or cleft palate revision from 1997 to 2011. Children’s hospitals (CHs) were analyzed as a separate group. For each record, age, gender, ethnicity, length of stay, total charges, principal payer, complications, and disposition were analyzed. Results: 10,450 correction surgeries were performed during 1997-2011. This was an annual case-volume of 697 and annual population-adjusted rate of 2.0, neither of which changed over time (. p=. 0.9 and 0.06, respectively). Of all surgeries, 21.5% were revisions, 48.3% were performed in CHs, 56.2% were performed on males, and 65.5% were performed on Caucasians. The median length of stay was 1 day, which did not change over time (. p=. 1.0). The median total charges increased from $9,074 to $35,643 over the studied period (. p<. 0.001). Admission to CHs was associated with shorter stay (1-3 days vs. 1-4 days) and higher total charges ($15,560 vs. $13,242; both p<. 0.001).

Complications occurred in 393 (3.8%) of the surgeries. This percentage did not change over time (. p=. 0.2). The most common complication was fistula/abscess/infection, which occurred in 159 cases (1.5%). Respiratory complications requiring ventilation occurred 66 cases (0.6%). Complications were more common in CHs (4.8% vs. 2.8%; p<. 0.001).

Mortality rate was <0.1%. Conclusions: Our study constitutes the entire surgical cohort within a state, allowing for an accurate representation of the true perioperative complication rate of these procedures. The prevalence, demographics, and outcomes of the cleft palate correction surgery have remained unchanged during 1997-2011. Collectively, our data suggest that primary and secondary palatoplasty present low perioperative risk.

**Publication type:** Journal: Article

**Source:** EMBASE

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**18.** Title: Revision rates and speech outcomes following pharyngeal flap surgery for velopharyngeal insufficiency.

**Citation:** JAMA facial plastic surgery, May 2015, vol. 17, no. 3, p. 197-201 (May 1, 2015)

**Author(s):** Setabutr, Dhave, Roth, Christina T, Nolen, David D, Cervenka, Brian, Sykes, Jonathan M, Senders, Craig W, Tollefson, Travis T

**Abstract:** Velopharyngeal insufficiency in children with cleft palate (and other causes) contributes to difficulty with communication and quality of life. The pharyngeal flap is a workhorse to address hypernasality and nasal air escape. However, there is a paucity of literature on the characteristics of cases that require revision. To measure the revision rate of pharyngeal flaps, compare the preperceptual and postperceptual speech scores, and identify the characteristics of those patients who required revision. A retrospective medical record review was completed for patients who underwent pharyngeal flap surgery from June 1, 2008, through January 31, 2013, at a tertiary academic center. Perceptual speech analyses and surgical revision rates. Perceptual speech patterns before and after surgery were compared using nasal air emission and resonance scores. The association between requiring revision surgery and covariates was analyzed using multivariable mixed-effects logistic regression. Sixty-one patients were identified, including 24 boys (39%) and 37 girls (61%). The mean (SD) patient age at the time of pharyngeal flap surgery was 8.2 (6.8) years (range, 3-55 years). Velopharyngeal insufficiency was associated with cleft palate in 51 patients (84%), and 17 patients (28%) had a syndrome. The mean (SD) time to surgery after the speech evaluation was 225 (229) days (range, 14-1341 days). The mean (SD) nasal air emission scores decreased by -1.1 (2.0 [1.1]) preoperatively to 0.8 [1.1] postoperatively. The mean (SD) resonance score decreased by -1.5 (2.4 [1.1]) preoperatively to 0.9 [1.1] postoperatively; P < .001). Flaps were revised in 12 patients (20%), including port revision in 9, complete flap revision in 2, and flap takedown in 1. The only covariate that was significantly associated with revision rates was increased age at surgery, which was associated with a higher probability of revision surgery (odds ratio, 1.31; 95% CI, 1.03-1.66; P = .04). Pharyngeal flap surgery, when appropriately selected, was effective at improving speech with a revision rate of 20%, which is comparable to previously published studies. Increased age at the time of the
pharyngeal flap surgery was associated with an increased need for revision surgery, supporting evidence that cleft centers should encourage early childhood speech evaluations with consistent documentation and prompt treatment.

**Source:** Medline

19. **Title:** Secondary bone grafting with simultaneous auto-tooth transplantation to the alveolar cleft  
**Citation:** Journal of Oral and Maxillofacial Surgery, June 2015, vol./is. 73/6(1050-1057), 0278-2391;1531-5053 (01 Jun 2015)  
**Author(s):** Miura K.-I., Yoshida M., Asahina I.  
**Language:** English  
**Abstract:** One of the most important purposes of secondary bone grafting of the alveolar cleft is to stabilize the maxillary alveolar arch with completion of the dental arch. We report a case of secondary bone grafting with simultaneous auto-tooth transplantation to the alveolar cleft, using particulate cancellous bone and marrow (PCBM) combined with platelet-rich plasma (PRP), which contains many growth factors. The patient was born with a bilateral cleft lip and left buccal-localized cleft alveolus. We performed bone grafting to the cleft using PCBM with PRP and transplantation of the supernumerary tooth under general anesthesia when the patient was aged 11 years, 10 months. The postoperative course was uneventful and without any complications. The orthodontic treatment was nearly complete 10 months after the operation. The transplanted tooth was stable, and a normal gingival contour was attained during the 2-year follow-up period. The case was successful in achieving a stable occlusal condition within a short period. We suggest secondary bone grafting with simultaneous auto-tooth transplantation as an option for alveolar cleft treatment.  
**Publication type:** Journal: Article  
**Source:** EMBASE

20. **Title:** The myomucosal vertical z-plasty in secondary cleft lip surgery: a novel technique for correction of the whistle deformity.  
**Citation:** JAMA facial plastic surgery, May 2015, vol. 17, no. 3, p. 215-218 (May 1, 2015)  
**Author(s):** Gudis, David A, Patel, Krishna G  
**Abstract:** To describe a novel technique for repair of the whistle deformity in secondary cleft lip surgery. Three patients who presented with a whistle deformity as a sequel of cleft lip surgery and underwent a novel myomucosal vertical Z-plasty tissue transposition at a tertiary academic medical center with a certified craniofacial center were retrospectively reviewed. Photodocumentation provides a measure of the aesthetic results. In the 3 patients, the technique was performed and the whistle deformity corrected such that the free margins of the lips were in full contact with the lips in a neutral resting position. No perioperative or postoperative complications were encountered. A novel myomucosal vertical Z-plasty transposition should be added to the tools available to the cleft surgeon for addressing this common defect.  
**Source:** Medline

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