divisions of plastics and craniofacial surgery and anesthesia at Children’s Hospital of Los Angeles created a neonatal neuroprotective anesthetic protocol (NPP) designed with dexmedetomidine as the dominant agent in early cleft lip repair (ECLR).

METHODS: Patients who underwent ECLR (repair before 2.5 months of age) within the last 4.3 years were identified. These patients were separated into patients receiving NPP and those who did not. Retrospective review of their records included preoperative, perioperative, and postoperative data regarding major and minor complications, and medication side effects. Total anesthetic time was defined as time from induction to extubation. Major complication was defined as a code event, aborted surgery, or intraoperative death. Minor complication was defined as a sustained alteration in heart rate, apnea event, or prolonged emergence time. Medication side effect was defined as a transient alteration in heart rate or hypopnea.

RESULTS: One hundred one patients underwent ECLR during our study period. All patients were either ASA class 1 or 2. Sixty-five percent (n = 65) received the NPP. The NPP group had a lower weight (4.01 kg [SD = 0.61] versus 4.38 kg [SD = 0.72]; P = 0.007) and required less intravenous morphine equivalents in the PACU (10.8% versus 30.5%; P = 0.013). There were no other statistically significant intraoperative or preoperative variables. There were no major anesthetic complications for either group and the minor anesthetic complication and medication side effect rate for the NPP group versus the non-NPP group was 6.2% versus 0%, P = 0.166 and 4.6% versus 2.7%, P = 0.650, respectively.

CONCLUSION: Our NPP in ECLR patients demonstrated no major complications and an acceptable minor complication rate associated with our novel anesthesia protocol. Millard’s rule of 10’s governing the ideal timing of elective surgery in infants may not apply to ASA 1 and 2 class patients.

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Prospective Outcomes of Secondary and Revisionary Facial Feminization Surgery

**Presenter: Ian T. Nolan, BM**

**Co-Authors:** Mona Ascha, MD; David C. Ludwig, MD, DDS; Fermin Capitan-Canadas; Anabel Sanchez-Garca; Marina Rodriguez-Conesa; Raul J. Bellinga; Jonathan P. Massie, MD; Paul S. Cederna, MD; Daniel Simon, Luis Capitan, MD; Thomas Satterwhite, MD; Shane D. Morrison, MD, MS

**Affiliation:** New York University School of Medicine, New York, NY

**PURPOSE:** Facial feminization surgery (FFS) for transgender and nonbinary patients typically addresses masculine characteristics of the brows, nose, mandible, chin, and thyroid cartilage, as these facial areas are most influential to gender perception. Because multiple facial areas are involved, FFS often includes multiple concurrent or staged procedures. Therefore, secondary and/or revisionary FFS are important considerations. Patients may present for completion of a planned second stage procedure, to augment their prior feminization with changes to additional facial areas not addressed in their initial FFS (both of these scenarios will be considered “secondary” if carried out in facial areas not addressed in primary FFS), or to revise an unsatisfactory surgery (revisionary FFS). This study aims to report prospective outcomes of secondary and revisionary FFS.

**METHODS:** Patients undergoing secondary or revisionary FFS were analyzed from a prospective international multicenter cohort study of FFS patients. Preoperative and postoperative (1 month and >6 months) endpoints were obtained for self-reported facial feminization outcome scores (a scale of 0–100), satisfaction (on a Likert scale of 0–4), and cephalometric measurements.

**RESULTS:** A total of 66 FFS patients were enrolled. Of these, 10 underwent either secondary FFS (n = 6) or secondary and revisionary FFS (n = 4) and were included in this analysis. Mean age was 41.7 years. All patients had
preoperative hormone therapy, for <1 year (n = 1), 1–5 years (n = 4), 6–10 years (n = 2), or >10 years (n = 3). Thirty percent (n = 3) reported a history of tobacco use. Self-reported pre-operative most masculine facial features were the jaw/chin (n = 6), nose (n = 5), and forehead/brow (n = 5). Secondary and revisionary FFS procedures included brow reduction (n = 9), genioplasty (n = 7), mandibular contouring (n = 6), tracheal shave (n = 2), and rhinoplasty (n = 6). Mean facial feminization outcome scores improved from 51.2 preoperatively (SD = 8.9) to 71.9 at longest follow-up (SD = 14.7), \( P < 0.01 \). Mean postoperative satisfaction was 3.0. Cephalometric values indicating successful feminization included decreased glabellar angle by 6.7° (from 98.9° to 92.2°; \( P < 0.05 \)) and increased nasofrontal angle by 6.0° (from 138.0° to 144.0°; \( P < 0.05 \)), with other statistically nonsignificant changes as well. Complications included hypertrophic scarring (n = 1) and orbital hematoma requiring surgical drainage (n = 1).

CONCLUSION: Our cohort of 10 patients reported favorable quality of life, patient satisfaction, and cephalometric outcomes, with low complication rates, comparable to those reported by primary FFS studies. Patients seeking FFS should be aware of the potential need for revisions and secondary procedures. Because of unique challenges of secondary and revisionary FFS, including tissue changes after primary FFS and psychosocial factors relating to dissatisfaction with primary FFS, these should be considered separately from primary FFS and from each other. This study is limited by our small cohort and lack of knowledge regarding our patients’ primary FFS procedures.

NYU Nasoalveolar Molding Protocol: From Birth to Adulthood

Presenter: Chen Shen, BS

Co-Authors: Lauren M. Yarholar, MD; Barry H. Grayson, DDS; Court B. Cutting, MD; Buddhathida Wangsrimongkol, DDS, DMSc; Becca T. Liu, DDS; David A. Staffenberg, MD, DSc (Honoris causa), Pradip R. Shetye, DDS; Roberto L. Flores, MD

Affiliation: NYU Langone Health, New York, NY

INTRODUCTION: One of the most actively debated therapies for patients with a cleft is nasoalveolar molding (NAM). Although supporters cite improvements in nasal symmetry, nasal aesthetics, columellar length, cost benefit, and nasal revision rates, one of the most convincing criticisms of NAM is the absence of reports on its effects at facial maturity, the target timepoint of assessment for cleft care interventions. This study reports clinical outcomes of NAM to facial maturity including rates of revision surgery to the lip and nose, incidence of secondary alveolar bone graft (ABG), and orthognathic surgery (OGS), and effects on facial growth.

METHODS: A single-institution retrospective review of patients all with a cleft who underwent NAM protocol from 1990 to 2000. Patients were included in the study if they had a diagnosis of unilateral or bilateral cleft lip and alveolus, with or without cleft palate. Patients were excluded if they had a syndromic diagnosis or if medical and/or dental records were incomplete. Lateral cephalogram measurements of patients with unilateral cleft lip and palate was obtained at 17 years or older and before OGS, if patients received OGS. These measurements were then compared with published Eurocleft cephalometric data.

RESULTS: One hundred eighty-nine patients were identified, of which 100 met inclusion criteria. Eighteen patients had cleft lip and alveolus only. The average age at last follow-up visit was 20 years (15–26 years). Average age at time of unilateral cleft lip repair was 4 months (3–7 months), bilateral cleft lip repair 6 months (3–10 months), unilateral palate repair 13 months (4–27 months), and bilateral palate repair 13 months (6–17 months). Gingivoperiosteoplasty (GPP) was performed in 86% (86/100) of patients. ABG was performed in 52% (52/100). Of those who underwent GPP, ABG was avoided in 56% (48/86). A total of 23% (19/82) of patients with both cleft lip and palate required secondary surgery for velopharyngeal insufficiency (VPI), and 8% (4/48) of patients who underwent LeFort I advancement also required surgery for VPI. OGS was performed in 49% (49/100), and revisions to lip and/or nose prior to facial maturity were performed in 49% (49/100). At the time of lip and/or nose revision, 74% (36/49) were older than 14 years. Overall, 17% (17/100) required neither ABG, OGS, nor nose or lip revision. Thirty-four patients with unilateral cleft lip had lateral cephalograms available for analysis. There were no significant differences in SNA (\( P = 0.44 \)), s-n-pg (\( P = 0.78 \)), NSL/NL (\( P = 0.76 \)), NSL/ML (\( P = 0.61 \)), or n-sp/n-gn × 100 (\( P = 0.79 \)) when compared with data from Eurocleft centers that used presurgical orthopedics.

DISCUSSION: Cleft lip and palate reconstruction were not delayed because of NAM. Surgery for VPI and OGS rates...