was 37.7 ± 36.2 mL, and the length of stay was 1.3 ± 0.6 days. The average preoperative CI was 69.6 ± 5.5, the average postoperative CI was 75.0 ± 4.7, and the percent change in CI from pre to post-op was 7.7 ± 9.7%. There were no statistically significant associations between age at surgery and change in CI (p=0.51), spring force and change in CI (p=0.78), spring excursion and change in CI (p=0.54), or number of springs and change in CI (p=0.20).

CONCLUSION: The change in CI from pre- to post-op was not affected by age at surgery, spring force or excursion, or number of springs. Despite the hypothesis that such parameters can be selected to increase or decrease the degree of head shape change, these modifiable factors do not seem to correlate with CI.

P74. A HIP WAY TO RECONSTRUCT NOSES: OUTCOMES WITH ILIAC CREST CAP CARTILAGE GRAFTS IN INTERMEDIATE CLEFT RHINOPLASTY

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PURPOSE: This case-control study evaluated the trends and outcomes of iliac crest cap cartilage (ICCC) grafts in an intermediate mixed-dentition (IMD) cohort undergoing cleft rhinoplasty.

METHODS: From 2006 to 2020, our institution performed 959 cleft rhinoplasties, 304 during IMD of which 140 underwent tip rhinoplasty with ICCC grafts concomitantly with alveolar bone grafting. Appropriate cohort and subgroup statistical analyses and regression modeling were completed.

Photomorphometric (PMM) analyses on basal, frontal and lateral views were conducted comparing cohorts with and without ICCC grafts and assessing nasal symmetry, protrusion and nasolabial angles.

RESULTS: There were no statistically significant differences between the ICCC cohort and controls regarding sex, cleft laterality, or surgical age (all p>0.1). There was a statistically significant increase in institutional use of ICCC over time (p<0.001), without correlation to sex, laterality, or age at surgery (all p>0.05). Within a subgroup of now skeletally mature patients, the prior use of ICCC was significantly correlated with a decreased incidence of requiring further rhinoplasties (q=0.2195; p=0.0176). PMM analyses demonstrated the unilateral cleft ICCC cohort had superior improvement in nasal symmetry postoperatively relative to controls (p=0.0277) but was otherwise comparable to controls, in nostril symmetry (p=0.696) and tip projection (p=0.334). No patients had iliac crest contour irregularities with functional sequelae.

CONCLUSION: ICCC provides an abundant source of cartilage for cleft rhinoplasty in the period of IMD concomitant to alveolar bone grafting. Our data demonstrates comparable or improved aesthetic outcomes with ICCC without additional morbidity and provides reassurance on ICCC’s retention over time.

P75. SECONDARY CLEFT RHINOPLASTY: WHAT, WHEN, AND HOW OFTEN IS IT BEING DONE?

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PURPOSE: To identify national practice patterns for secondary cleft rhinoplasty and to include preferred age of operation and variation in surgical technique relative to patient age.

METHODS: Program coordinators of all 193 cleft teams certified by the American Cleft Palate-Craniofacial Association (ACPA) were requested to forward a survey to their team cleft surgeons.

RESULTS: Fifty-five surgeons completed the survey, representing forty (21%) of ACPA-approved cleft teams. The average age that surgeons first consider intermediate cleft rhinoplasty is 5.83 +/- 2.66 years, and that for definitive (final) cleft rhinoplasty is 15.86 +/- 1.73 years. Resolving
airway obstruction was the reason most cited for performing septoplasty. Significantly more surgeons consider performing a septoplasty during definitive rhinoplasty than during intermediate rhinoplasty. However, the indication for septoplasty in the two procedures does not differ. Intermediate cleft rhinoplasty was more often done through a closed approach, whereas definitive cleft rhinoplasty was more often done through an open approach. Autologous septal cartilage was the most common source for tip augmentation, columellar support, and dorsal support. Cadaveric cartilage, when used, was more often utilized in intermediate cleft rhinoplasty.

CONCLUSION: Timing for secondary cleft rhinoplasty and differences in technique relative to patient age have not previously been evaluated. The present study highlights the need for improved data collection to establish best practice for timing, technique, and outcomes of secondary cleft rhinoplasty.

P76. SINGLE Z-PLASTY VERSUS DOUBLE-OPPOSING Z-PLASTY: A COMPARISON OF SUCCESS WITH PALATAL LENGTHENING

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PURPOSE: Palate length is associated with improved speech outcomes in cleft palate repair. The Furlow double-opposing Z-plasty (2ZP) utilizes two Z-plasties to reorient palatal musculature and lengthen the velum. An overlapping intravelar veloplasty with a single oral Z-plasty (1ZP) has been described previously. The authors hypothesize that these 2 closure techniques will result in similar palatal lengthening.

METHODS: A retrospective comparative study of patients with a cleft palate was conducted. All included patients underwent either 2ZP or 1ZP. Pre- and post-operative measurements of the palate were recorded along various dimensions. The primary outcome of interest was anterior-posterior (AP) palatal length, defined as a straight line measurement from the teeth to the uvula. Analysis was conducted to detect statistical differences using the Mann-Whitney-Wilcoxon test for significance.

RESULTS: 80 patients met inclusion criteria (2ZP = 14, 1ZP = 66). Patients who underwent 2ZP exhibited an average increase in palatal length of 7.93mm, and 1ZP was 7.23mm. Both techniques led to a statistically significant increase in palatal length. There was no statistically significant difference observed in the change of the AP palatal length by technique (2ZP 16.2% vs 1ZP 15.7%; p = 0.53).

CONCLUSION: A single oral Z-plasty results in statistically significant palatal lengthening in patients. There was no difference seen in the AP dimension of palate length comparing 2ZP and 1ZP techniques.

P77. LARGE DEFECT FOREHEAD RECONSTRUCTION: AESTHETIC UNIT PRINCIPLES FOR RECONSTRUCTION

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PURPOSE: Classic methods utilizing skin grafts for reconstruction of large forehead defects can result in contour deformity without animation or uniformity of color, leading to a sub-optimal outcome for facial expressions. This study defines the aesthetic units of the forehead and describes reconstructive options for optimal aesthetic outcomes.

METHODS: This is a retrospective review of patients who underwent large forehead reconstruction at the Johns Hopkins Hospital. Patients were categorized by overall quality of reconstruction, adequacy of thickness and color match, durability, and complications.

RESULTS: 104 procedures were performed on 90 patients using one of nine reconstructive flap options. Outcomes were compared to 42 patients previously treated with skin grafts. For central defects, optimal management utilized a separation of components, frontal parietal advancement, hemicoronal advancement, bicoronal advancement, multiple local flaps, or free tissue transfer. Lateral defects were