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**CONCISE PURPOSE:** Resection of head and neck malignancies commonly results in significant fasciocutaneous defects of single or multiple cosmetic subunits. Reconstruction can be challenging due to patient age, comorbidities, and previous irradiation. The ideal reconstructive approach delivers locally matched tissue, based on reliable vascularity of the external carotid system, and minimizes donor site and perioperative morbidity. The Facial Artery Cheek Subunit (FACS) and Extended Facial Artery Cheek Subunit (EFACS) flaps are facial artery perforator flaps based on the aesthetic subunit of the cheek. They were developed to permit a multifaceted reconstructive approach to parotid and other fasciocutaneous defects to simultaneously reconstruct multiple subunits with locally matched tissue and address facial nerve paresis in a single procedure. We describe our experience with the first 50 patients.

**METHODS AND MATERIALS:** A cadaveric study was undertaken to examine the feasibility of the use of the cheek aesthetic subunit, with extensions into the neck as necessary, to achieve simultaneous reconstruction of adjoining defects (periauricular, perinasal, and perioral) and management of ipsilateral facial nerve dysfunction. A system was developed that utilizes selective facial retaining ligament release, islanding of the skin flap, tunnelling to permit the use of fascial slings and resuspension with elevation of perioral and perinasal skin relative to the cheek aesthetic unit, to achieve effective, and rapid management of facial ptosis. Fifty patients whose tumour extirpation resulted in a facial or neck fasciocutaneous defect underwent FACS or EFACS flap reconstruction to dually restore cosmetic subunits and address facial nerve palsy.

**EXPERIENCE AND SUMMARY OF RESULTS:** FACS and EFACS flaps were applied in over 50 patients for defects up to 120 cm². There were no cases of flap loss. Only 1 had tip necrosis. Reconstructive time was under 2 hours in all patients. Postoperative wound infection occurred in 2 patients. All wounds healed within 2 weeks of surgery, and adjuvant radiotherapy was not delayed in any patient. No revisional surgery was necessary with the exception of periorbital procedures such as gold weight insertion, brow lift, and tarsorrhaphy in some cases. The approach successfully addressed the lower facial stigmata of facial muscle weakness.

**REASONABLE AND UNDERSTANDABLE CONCLUSIONS:** The FACS and EFACS flaps are versatile techniques that can reconstruct head and neck oncology defects and facial nerve palsy in a single operation. They may be used to address cheek, neck, periauricular, perioral and perinasal reconstruction, as well as the sequelae of facial nerve palsy. They are especially useful in high-risk patients because of their low complication rate, cost-effectiveness, and reduction of donor site morbidity.

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**What Is Normal Newborn Sleep? A Characterization of Sleep Patterns in Neonates With and Without Airway Obstruction**

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**PURPOSE:** Polysomnography is vital in evaluating neonatal airway obstruction. Although many institutions use sleep data to select patients for mandibular distraction osteogenesis (MDO), no “normal” published references exist for this age. We present normative polysomnography data for newborns age 0–1 month. We also compare this normative reference to pre- and postoperative data of infants this age undergoing MDO.

**METHOD/DESCRIPTION:** Following institutional review board approval, normative subjects were recruited from our...
NICU to undergo nap polysomnography. Included were infants without airway obstruction, gestational age 37–42 weeks, and age <30 days. Data included apnea-hypopnea indices, pulse oximetry, CO₂, electroencephalogram, and ECG. One blinded sleep physician read all studies. Sleep data for newborns undergoing MDO were collected prospectively (2016–2018). All data were collected and analyzed using REDCap and SPSS software.

RESULTS: Nineteen neonates without airway obstruction provided normative sleep data; median age at polysomnography was 4 days, and median sleep time was 182 minutes. Median total apnea-hypopnea (AHI), obstructive apnea-hypopnea (OAHI), and central apnea indices (CAI) were 6.92, 4.92, and 0.66 events/h. The median O₂ nadir was 91%. Polysomnography was done on 12 neonates with airway obstruction before and after MDO. Compared with the controls, there were no significant differences in age, race, or gender. Median age at preoperative study was 7 days, and median sleep time was 333 minutes. Median AHI was 44.60, OAHI was 41.91, and CAI was 1.97. Median O₂ nadir was 82%. Before undergoing MDO, neonates with airway obstruction had significantly worse AHI, OAHI, and O₂ nadir than normative counterparts (P < 0.001). There was no significant difference in CAI. Postsurgical sleep data were collected after activation phase of MDO; median age was 47 days, and median sleep time was 332 minutes. In this group, median AHI was 6.08, OAHI was 3.95, and CAI was 1.32. Median O₂ nadir was 93.5%. Paired t tests demonstrated significant improvements in OAHI (P < 0.001), AHI (P < 0.001), and oxygen saturation nadir after MDO (P = 0.004). When comparing the normative group to neonates who underwent MDO, there was no significant difference in oxygenation or any apnea-hypopnea index.

CONCLUSION: In children, OAHI > 1 is considered abnormal; this norm has been extrapolated to neonates. Our findings demonstrate “normal” neonates have more obstructive and central apneic events than previously appreciated, with a median of 4.92 obstructive and 6.92 total events per hour. Furthermore, newborns without airway obstruction still exhibit a wide range of “normal” OAHI values (1.66–19.08). Newborns with airway obstruction had significantly worse OAHI/AHI and O₂ saturation nadir than their nonobstructed counterparts and exhibited improvement to normative levels following MDO. Each center with a multidisciplinary MDO team should consider collecting normative neonatal sleep data to reflect their regional population, enabling calibration of existing patient selection algorithms and informing important discussions with anxious parents.

Functional Results of Oral Cavity Organs Reconstruction By Innervated Free Flaps in Oncological Patients

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INTRODUCTION: Reconstruction of the oral cavity organs by microsurgical autotransplantation after the radical surgical treatment is a method of choice to return patients to the normal life. The tissues used as a donor area provide an opportunity for simultaneous reinnervation. The use of innervated flaps has an advantages, the most important of which are restoration of sensation and decreasing autograft involution.

PURPOSE: Improving the functional results of the reconstruction of the organs of the oral cavity, assessing the benefits of using reinnervated free flaps.

MATERIALS AND METHODS: In 2014–2019 in the Sechenov University were performed 30 reconstructive operations on the oral cavity using reinnervated flaps. Reconstruction was mostly performed with a free radial flap with the inclusion of the lateral cutaneous nerve (n = 18), for the more extensive defects a free thoracodorsal flap with the inclusion of the thoracodorsal nerve was used (n = 8) and also a rectal muscle flap with the inclusion of the 12th intercostal nerve (n = 4). Anastomoses were performed mainly to the branches of the hyoid nerve and the large ear nerve. Such operations were performed simultaneously to the patients without regional and distant metastases: T (1–4) N0M0, and in the delayed period to the patients without continued growth or relapse. The treatment results were evaluated at 0, 5, 1, and 1.5 years after surgery. To assess the results, we used modified EORTC QLQ-H&N35 questionnaire. Also, the restoration of sensitivity, speech intelligibility, and swallowing were assessed. As an objective method, we start to use histological evaluation and immunohistochemical staining of biopsy specimens. To determinate the functional results, we use functional magnetic resonance imaging.

RESULTS: Research work continues. All patients were discharged 3–4 weeks after surgery. After 5 weeks, all