treatment, comorbidities, and anticoagulation use were also retrieved. Free flap reconstruction twice, or free flap and pedicle flap reconstructions during the same hospitalization was recorded as free flap failure. Logistic regression was used to identify factors that increased risk of free flap failure.

RESULTS: A total of 21,548 patients with head and neck cancer were identified; 883 (4.1%) experienced free flap failure. Use of aspirin, clopidogrel, urokinase, prostaglandin (PGE1), low-molecular-weight heparin (LMWH), and operation time significantly increased the risk of free flap failure. However, some potential cofounders could not be identified from the database.

CONCLUSION: Several statistically significant findings were prone to influence by potential confounders. The only interpretable and clinically applicable result was that longer operation time and preoperative chemotherapy significantly increased the likelihood of free flap failure.

TCAP Flap for Faciocervical Reconstruction: Our Experiences and Innovations

Presenter: Huifeng Song, MD, PhD
Co-Author: Minghuo Xu, MD
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OBJECTIVE: To explore the application of transverse cervical artery perforator (TCAP) flap for the reconstruction of face and neck.

METHODS: In this study, 39 cases with the deformities on face and neck were treated using transverse cervical artery perforator flap or pre-expanded ones since May 2008. The size of the flap ranged from 5cm×8cm to 14cm×22cm. The donor sites were closed directly in the above 35 patients with expander or reconstructed by split skin grafting in 4 patients with no expander.

RESULTS: The flaps in 39 patients were transferred to the defects with free-tension and no flap loss. Through a mean time of 6 months follow-up, all the patients were satisfied with recipient function and appearance. The color and the texture matched well with the recipient area.

CONCLUSION: The transverse cervical artery perforator flap can be considered one of the best options for faciocervical reconstruction with excellent result on the recipient site and only less obvious line-shape scar on the donor site after sutured directly.

Evaluation of Long-Term Functional and Aesthetic Results to use a Single Rhomboid-Shaped Fascial Strip for Severe Congenital Unilateral Blepharoptosis

Presenter: Daisuke Sakahara, MD
Co-Authors: Keisuke Imai, MD; Takeshi Masuoka, MD; Hirokazu Shido, MD; Kimiyo Matsumoto, MD; Koji Kawamoto, MD; Jumpei Tsumoto, MD
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BACKGROUND: Surgery for congenital blephaloptosis is often performed at about 4–5 years of age. Long-term follow-up is important during facial growth. We performed frontal suspension using a single rhomboid-shaped autogenous fascial strip. We conducted a long-term evaluation of severe congenital unilateral blepharoptosis patients.

PATIENTS AND METHODS: 334 patients with congenital blepharoptosis underwent primary surgery in our department between 1994 and 2006. Of these, 192 patients had unilateral congenital blepharoptosis with levator function of 3 mm or less on the affected side. All patients received consultation with a pediatric ophthalmologist and were referred to our department. All patients had normal corneal sensation and the normal Bell phenomenon. Patients with blepharophimosis syndrome were excluded from this study, as were those without photographs and examinations for at least 10 years.

The functional evaluation included the measurement of visual acuity (log MAR), palpebral fissure height (PFH), and marginal reflex distance (MRD) on photographs to compare both eyes preoperatively and postoperatively. Visual acuity was evaluated for patients with laterality. PFH was assessed as the ratio of the right and left eyes, and the ratio of MRD1 and 2 (= MRD ratio) was used in the
evaluation. Morphological evaluation was based on patient and family comments. The patients were also asked to state their satisfaction and complaints. The surgical results were evaluated as being excellent, good, fair, poor, or other according to our criteria:

RESULTS: There were 95 patients. Left ptosis was present in 43 patients and right ptosis in 52 patients. Mean age at the time of operation was 4.8 years (range 3.5–7.4 years). The follow-up period was 10 to 12 years. Fifty-eight patients had laterality, for whom preoperative and postoperative vision results were recorded. Evaluation of the log MAR ratio of the affected side showed improvements in visual acuity (mean ± S.D.: preoperatively 0.25 ± 0.161, postoperatively 0.085 ± 0.120, p < 0.001). The postoperative MRD ratio of the affected eye was significantly improved compared to that before surgery (preoperatively 0.021 ± 0.0135, postoperatively 0.611 ± 0.0131, p < 0.001), but it did not reach the value of the MRD ratio of the unaffected eye (preoperatively 0.704 ± 0.0418, postoperatively 0.663 ± 0.0430).

No clinically significant difference in postoperative PFH was seen when comparing the affected side and unaffected side as a ratio (preoperatively 0.367 ± 0.258, postoperatively 0.925 ± 0.171). Of 95 patients with unilateral ptosis, the surgical results were excellent in 62, good in 14, fair in 12, poor in 3, and other in 4 patients. Patient dissatisfaction resulted from various outcomes, including trichiasis, large differences in the left-right visual acuity, and strabismus. No major complications occurred. Aesthetic and functional results were good, with a patient satisfaction rating of 80%. Secondary surgery was performed in 17 of 19 patients with an unfavorable outcome.

CONCLUSION: Based on our evaluation, our surgical procedure appears useful for patients with unilateral congenital ptosis. Moreover, blephaloptosis surgery is useful for improving visual acuity. We report this surgical procedure and discuss the long-term results.

Revisiting the Free Scapula Flap for Reconstruction of Extensive Maxillary Defects

Presenter: Stefanos Boukovalas, MD
Co-Authors: Patrick B. Garvey, MD; Rene D. Largo, MD

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INTRODUCTION: Oncologic resections in the maxillary region often require advanced reconstruction of soft tissue and bone defects. The free fibula osteocutaneous flap remains the workhorse flap, however, in extensive defects, additional soft tissue flaps may be required, resulting in increased morbidity. We present the outcomes for maxillectomy patients reconstructed with a single, chimeric osteomyocutaneous free scapula flap, utilizing CAD/CAM technology.

METHODS: Patients who underwent maxillary reconstruction with free scapula flap at MD Anderson Cancer Center from January to December 2017. Patient demographics, type and extent of defect, surgical technique, intraoperative and postoperative events were recorded. A new approach in the design of the free scapula flap is introduced, by adding chimeric elements based on the thoracodorsal artery, harvesting the osseous component off the circumflex scapular artery (CSA) (n=3). The dominant pedicle for the osseous component was the CSA (n=2) or angular artery (n=3). CAD/CAM utilization required no intraoperative adjustments or additional osteotomies. Long-term outcomes were assessed using DASH questionnaires and VAS scores.

RESULTS: 5 patients were included. Average operative time was 663 minutes (range 321–1137) and average ischemia time 122 minutes (range 50–212). The scapula flap was designed based off the subscapular (n=1), thoracodorsal (n=3) or circumflex scapular artery (CSA) (n=1). The dominant pedicle for the osseous component was the CSA (n=2) or angular artery (n=3). CAD/CAM utilization required no intraoperative adjustments or additional osteotomies. Long-term outcomes were assessed using DASH questionnaires and VAS scores.

CONCLUSION: We suggest considering reconstruction with single, chimeric osteomyocutaneous free scapula flap in patients with large maxillary defects involving the palate and/or the orbit, elderly patients requiring early postoperative mobilization or when other options are unavailable. CAD/CAM may decrease operating time, optimize pre-operative planning and accuracy of reconstruction and improve patient outcomes.

Analysis of 30 Day Mortality after Free Flap Reconstructions for Head and Neck Cancer Patients: A Propensity-Score Matched Analysis of a Nationwide, Population-Based Cohort Study

Presenter: Tony Chieh-Ting Huang, MD, MSc

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