CONCLUSION: While current dermal replacement products are limited in clinical utility by the absence of an inherent vasculature, we have demonstrated the successful fabrication of a novel, rapidly prevascularized regenerative template containing an inherent hierarchical vasculature utilizing the powerful angiogenic regulator S1P. Such constructs hold tremendous promise for clinical translation and especially for use in challenging wounds.

Anatomic Basis of the Gastroepiploic Vascularized Lymph Node Transfer: A Radiographic Evaluation Using Computed Tomography Angiography (CTA)

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INTRODUCTION: The omentum, nourished by the gastroepiploic vessels, has gained popularity as an option for vascularized lymph node transfer (VLNT). The actual anatomic details related to the gastroepiploic vascular axis and lymph nodes (LN) have not been investigated. The purpose of this study is to describe the right gastroepiploic artery (GEA) and related structures by using computed tomography angiography (CTA).

METHODS: A retrospective analysis was conducted on ten patients with no known abdominal or pelvic malignancy who received CTA. These scans were reviewed for objective donor-site characteristics by one reviewer (CH). Statistical models were used to identify the specific LN basin and right GEA characteristics.

RESULTS: The right GEA was identified in nine of ten patients. It was found to have an average diameter of 2.98mm at its origin (SD0.89, range 1.7–4.4). The distance from right to left GEA origin was 17.9cm (SD6.34, range 10.3–29.9). The gastroduodenal artery length prior to right GEA takeoff was 3.78cm (SD1.29, range 2.19–5.92). Nine patients had identifiable lymph nodes in the right GEA lymphosome. There were 3.3 LNs identified per patient (SD3.0, range 0–10). The average distance from each LN to the right GEA origin was 7.50cm (SD3.51, range 2.04–15.4). The distance from the right GEA origin to the most proximal LN was 4.13cm (SD1.65, range 2.04–7.13). The distance from the GEA origin to the third LN was 8.91cm (SD2.90, range 7.11–13.2). Each LN was within 8.55mm (SD7.9, range 1–28.7) of the right GEA.

CONCLUSION: The gastroepiploic VLNT may be a valuable option when selecting a donor site for the surgical treatment for lymphedema. On average, three lymph nodes exist along the right GEA, which is comparable to other favorable and commonly used donor sites. When using the right GEA donor site for VLNT, the plastic surgeon should anticipate using a pedicle length of no more than 4cm, a total flap length of 9cm with a 3cm cuff of tissue in order to obtain at least 3 lymph nodes for transfer. CTA is an effective imaging modality that can be used to preoperatively plan for vascularized lymph node transfer.

SURGICAL PEARLS SESSION

Three Dimensional Technology Assisted Facial Contour Surgeries Training: Standardized Practice

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INTRODUCTION: In Asia, an oval shaped face is highly desired. Therefore, facial contour surgeries including reduction gonioplasty, reduction malar-plasty and genioplasty have become increasingly popular. However, the learning process for trainees is long with unpredictable skill acquisition. Computer assisted design (CAD) and computer assisted manufacture (CAM) have been advocated to reduce surgical challenges and help achieve favorable clinical results. In this study, we aim to evaluate the effectiveness of our training model for facial contour surgery and the evaluated the effectiveness of 3D-printed surgical templates.
METHODS: A 3D surgical model was established by creating a 3D printed skull covered with elastic cloth. 10 plastic surgery residents enrolled in the study. CAD was performed for all cases based on 3D CT data. The surgical templates were designed and printed out for the experimental group. Experimental/control group (n=5 each) performed facial contour surgeries on the surgical model with/without 3D surgical templates. The effectiveness of the surgical model was evaluated by a trainee-reported questionnaire. The surgery time, symmetry, surgical accuracy, and learning curve were recorded and compared between two groups.

RESULTS: Trainees reported the training model to be very helpful (4.9). When using 3D surgical templates, the outcome symmetry and accuracy were significantly improved compared. The learning curve was also shortened in reduction genioplasty, reduction malarplasty and genioplasty.

CONCLUSION: Our training model may be considered as a plastic surgery educational tool for shortening the learning curve and improving outcomes in facial contour surgeries.

PURPOSE: The purpose of this work is to present our results in 80 patients using two different laser liposuction devices which different wave lengths in one single probe. One device, the Palomar SlimLipo™ uses 924 nm and 975 nm wavelengths and the second, the Deka SmartLipo™ uses the 1064 nm wavelength, both aiming in the same target: shrink the skin!

METHODS: We evaluated the results obtained in these 80 patients who were treated with the SlimLipo™ and the SmartLipo™ Laser liposuction devices. All patients were operated from November 2010 to March 2013 and evaluated 90 days after the procedure. This is, according with the manufacturers, the “peak” moment of the “shrinking” of the skin.

RESULTS: The main complication of laser liposuction is the burn, which occurs from the inside to outside and is always a third-degree burn. The biggest difficulty is the early diagnosis if an area is being subjected to excessive heat.

In our series of 80 patients we had 4 burns (5.7%), all with the SlimLipo™ liposuction device (total of 42 patients). None with the SmartLipo™ liposuction device (total of 38 patients).

In our opinion the disposable probe of the SlimLipo™ device is responsible for the high risk of burns, once there is no security mechanism to avoid the probe to go through the dermis. The SmartLipo™ optic fiber goes through a non-disposable probe and, if it touches the dermis the tip goes back through the cannula.

CONCLUSION: We can say that both devices can achieve excellent results shrinking the skin, but the disposable probe of the SlimLipo™ device is responsible for a high risk of complications (burns).

Eyebrows Elevation – a New, Easy and Cheap Trick

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