The Usage Of Adipofascial Anterolateral Thigh Flap For The Reconstruction Of Soft Tissue Defects At Extremities

Guzey Serbulent, MD; Sahin Ismail, MD; Mustafa Nisanci, MD; Isik Selcuk, MD

INTRODUCTION: Although reconstruction with adipofascial anterolateral thigh flap (ALTA) is commonly recommended treatment alternative for the extremity defects there are a few studies published in the literature. In this study it was aimed to show the advantageous and disadvantageous of ALTA flap due to experiences that we got from 9 patients at whom superficial extremity defects were reconstructed with ALTA flap.

MATERIALS AND METHODS: From 2008 to 2016, 9 patients with extremity defects were treated. All soft tissue defects are superficial and are localized on the hand dorsum in 2 patients, on the palmar aspect of left hand in one patient, on the right wrist in 2 patients, on the left wrist in 2 patients, on the knee in one patient and on the foot dorsum in remaining patient. Wounds were prepared by serial debridement and closed with ALTA flap as soon as possible. During the separation of the flap a minimum of 3 mm fat (a little bit more around the perforator vessel entry) should be preserved over the fascia to ensure the vascularity of the flap. The flaps were inset to the defect adipose side upward in three patient and downward in 4 patients.

RESULTS: Eight of nine flaps were supplied with musculocutaneous perforators, while the remaining flap was supplied with septocutaneous perforator. The overall flap survival rate was 100%. In three cases, which all are adipose tissue upward inset flaps, partial skin graft loss occurred. Secondary skin grafting was performed and the wounds closed successfully. Other flaps have also minor graft loss due to minor hematoma, but these areas do not need any surgical intervention and epithelized spontaneously. No secondary debulking procedures were required in any of the flap. All of the donor sites were closed directly with acceptable appearance, minimal donor site morbidity and no contour deformation except in one patient. In that patient wound dehiscence was occurred in the donor site incision. The wound was closed with split thickness skin graft.

CONCLUSION: In this study we observed that ALTA flap is an appropriate choice for the reconstruction of soft tissue defects at the extremity. The main advantages of the flap are; sufficient size and pedicle length with pliable structure, minimal donor side morbidity, good aesthetic result and prevention of adhesions.

DISCLOSURE: None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

The Use of the Laser Level to Ensure Symmetry in Aesthetic Breast Surgery

Michael E. Kelly, MD; Giselle Prado, BS; Emma Kelly, BA; Jose Rodriguez-Feliz, MD

INTRODUCTION: Extensive research has been conducted into the ideal aesthetic lengths and heights of various body parts, but the methods of implementation to achieve symmetry in plastic surgery remain the same: a tape measure and our artistic eye. When performing mastopexy or breast reduction, the new Nipple Areolar Complex (NAC) is often marked by transposing the location of the inframmary fold (IMF) onto the anterior surface of the breast. Plastic surgeons use the range of 19-23cm from the sternal notch (SN) to the IMF as the ideal nipple height. The process of copying the height of the NAC from one breast to the other is complicated by differences in width and projection between breasts. We present our technique for marking the new NAC position during aesthetic breast surgery using a laser level.

MATERIALS AND METHODS: The new NAC position was marked on the right breast by transposing the IMF onto the anterior surface of the breast. The distance from the SN to this point was calculated with a tape measure and transposed to the contralateral breast. The laser level was then used to ensure symmetry. Adjustments in NAC height were performed as indicated by the laser level.

RESULTS: The new NAC position on the right breast was measured at 19 cm from the SN. When the transposed measurement on the left breast was verified with the laser level, we found the new NAC to be 1cm higher as calculated by the tape measure. After adjustments, the correct nipple height was 20cm from the SN on the left breast. Post-operative results show symmetric NAC placement.
CONCLUSION: Objective breast measurements quantifying volume, shape, and surface area continue to be important to ensure great aesthetic outcomes in breast surgery. Conventional methods to identify the location of the new NAC do not account for differences in breast width and projection, which could lead to NAC that are not leveled. In our experience, the use of the laser level has been a great addition to our armament to ensure NAC symmetry during breast surgery. The application of leveling tools is not limited only to breast surgery as they have also been used successfully in other procedures such as: abdominoplasty, TRAM flaps, and scar revisions.

DISCLOSURE/FINANCIAL SUPPORT: The authors have no disclosures or financial support to report.

REFERENCES:
1. Westreich M. “Anthropomorphic breast measurement: protocol and results in 50 women with aesthetically perfect breasts and clinical application.” Plast Reconstr Surg. 1997 Aug; 100(2): 468–479.
2. Xi W, Perdanasari AT, Ong Y, et al. “Objective breast volume, shape and surface area assessment: a systematic review of breast measurement methods.” Aesthetic Plast Surg. 2014 Dec; 38(6): 1116–1130.

The Use of Wave Shaped Bone Supported Arch Bars in the Treatment of Mandibular Fractures

Elizabeth Kiwanuka, MD, PhD; Rajiv Iyengar, BS; Daniel Kwan, MD

BACKGROUND: Maxillomandibular fixation (MMF) with stainless steel Erich arch bars or intermaxillary screws has traditionally been the cornerstone of the treatment of mandibular fractures. Nonetheless, several well-documented disadvantages persist including intraoperative wire-stick injuries, poor oral hygiene maintenance, and increased operative time. 1, 2 Hybrid systems using bone supported arch bars have therefore been proposed as an alternative to address these issues. 3, 4 The newest addition is the Matrix Wave MMF system that features wave-shaped bone supported arch bars with locking screws. This study illustrates our experience with this novel system in the treatment of mandibular fractures.

METHODS: Two patients with mandibular fractures were treated with the new Matrix Wave MMF system. The first patient presented with a parasympyseal fracture on the right side and an angle fracture on the left. The second patient had a nondisplaced right mandibular body fracture and a left ramus and coronoid process fracture. The arch bars were contoured, fitted and secured using 6mm screws. The malleable arch bar was either stretched or compressed to ensure optimal positioning. 24-gauge interdental fixation wiring was placed using the fish loop technique and transverse 24-gauge wires were fashioned on either side of the fracture to achieve compression and relative fixation about this point.

RESULTS: Patients were retained in MMF until there was stable occlusion and clinical evidence of healing. Oral hygiene was unproblematic and there were no intraoperative wire-stick injuries with insertion of the system. Post-operative Panorex scans did not reveal any evidence of damage to tooth roots. None of the screws became embedded in the mucosa secondary to overgrowth; the arch bars were successfully removed in an outpatient setting without local anesthesia.

CONCLUSIONS: The malleability of the bone supported arch bar allows for optimal screw placement and robust compression. Moreover, the self-drilling, locking screws sit above the plate to provide additional anchor points for bridge wires to better approximate fracture segments. In our experience, this novel hybrid system minimizes the drawbacks associated with traditional MMF techniques and offers a viable alternative for closed fixation of mandibular fractures.

DISCLOSURE: Nothing to disclose.

REFERENCES:
1. Coletti, D. P., Salama, A., Caccamese, J. F., Jr. Application of intermaxillary fixation screws in maxillofacial trauma. Journal of oral and maxillofacial surgery: official journal of the American Association of Oral and Maxillofacial Surgeons 2007;65:1746–1750.
2. Farber, S. J., Snyder-Warwick, A. K., Skolnick, G. B., Woo, A. S., Patel, K. B. Maxillomandibular Fixation by Plastic Surgeons: Cost Analysis and Utilization of Resources. Annals of plastic surgery 2015.
3. Chao, A. H., Hulsen, J. Bone-supported arch bars are associated with comparable outcomes to Erich arch bars in the treatment of mandibular fractures with intermaxillary fixation. Journal of oral and maxillofacial surgery: official journal of the American Association of Oral and Maxillofacial Surgeons 2015;73:306–313.
4. Kendrick, D.E., Park, C.M., Fa, J.M., Barber, J.S., Indresano, A. T. Stryker SMARTLock Hybrid Maxillomandibular