Co-Authors: Osman Akdag, MD; Zekeriya Tosun, MD

Affiliation: Selcuk University, Konya

PURPOSE: Medial canthal area has complex anatomic and functional structures including medial canthal tendon and nasolacrimal duct.\(^1,2\) Reconstruction of medial canthal area must be include medial canthal tendon, nasolacrimal duct and soft tissue defect.\(^1,2\) In this study, we present functional reconstruction of full thickness medial canthal area with Y shape periosteum flap, dacryocystorhinostomy and local flap.

MATERIAL AND METHODS: Between 2014 and 2017 years, 12 patients were included in this study. All of them had extensive medial canthal lesion, so the surgical excision included the nasolacrimal duct and the medial canthal tendon. Simultaneous lesion, nasolacrimal duct and the medial canthal tendon was excised and reconstruction was performed for full thickness defect. The Y shape periosteal flap was horizontally designed from remnant perios- teum of nasal bone and frontal process of maxillary bone. Upper and lower part of the Y shape periosteal flap was sutured to the upper and lower eyelid. A silicone tube was used for dacryocystorhinostomy. Soft tissues defects were reconstructed with glabellar flap in 5 patient and angular artery perforator propellar flap\(^3\) in 7 patients, respectively. The silicon tube was removed at 3\(^{th}\) week after surgery. All patients were followed up at least 13 months (13–55). Aesthetic result of surgery, function of nasolacrimal duct and eyelid laxity was evaluated with Satisfaction Evaluation Scale (SES: -1 = not satisfied, 0 = no change, 1 = moderate, 2 = good, 3 = very good), lacrimal duct irrigation test, lower lid distraction test for all patients at twelve months after surgery.

RESULT: 8 patients were male, 4 female. The mean age of them was 69,5 years. Defects size of the excised soft tissues ranged from 3.8 cm\(^2\) to 6.9 cm\(^2\). There was no intraoperative or postoperative complication such as flap dehiscence or flap necrosis, lid lag deformity, ectropion and ptosis. Epiphora was observed in two patients. One of the was reoperated and problem was resolved, but other one didn’t want to reoperation. Tension of the periosteal was good. There was no differentiation between glabellar and angular artery perforator flap. All patients except one was very satisfied with the result, other one good satisfied.

CONCLUSION: Reconstructive surgery of medial canthal area is a challenging surgical procedure because of requiring aesthetic and functional outcome.\(^1,2\) Y shape periosteal flap provides acceptable stability and location of the eye lid. Full-thickness defects of the medial canthal area by using Y shape periosteal flap, dacryocystorhinostomy and local flap is an alternative technique in medial canthal reconstruction, with acceptable functional and aesthetic outcomes.

REFERENCES:
1. Panizzo N, Colavitti G, Papa G, Ramella V, Tognetto D, ArneÅ¾ ZM. Reconstruction after wide excision in medial canthal region: the extended bilobed glabellar-palpebral flap. J Plast Reconstr Aesthet Surg. 2015 Jan;68(1):131–2.
2. Stewart CM, Norris JH. Reconstruction of extensive medial canthal defects using a single V-Y, island pedicle flap. Orbit. 2018 Jan 15;1:1–4.
3. Brunetti B, Tenna S, Aveta A, Segreto F, Persichetti P. Angular artery perforator flap for reconstruction of nasal sidewall and medial canthal defects. Plast Reconstr Surg. 2012 Oct;130(4):627e-628e.

Simultaneous Breast Augmentation and Rib Cartilage Harvest for Rhinoplasty Using a Single New Inframammary Fold Approach

Presenter: Woo Young Choi, MD

Co-Authors: Cheol Woo Park, MD, PhD; Myung Ju Lee, MD, PhD

Affiliation: Chosun University, Gwangju

PURPOSE: Rib cartilage provides sufficient volume and strength for stabilizing the cartilage framework of the nose; thus, rib cartilage rhinoplasty is considered ideal for secondary rhinoplasty.\(^1,3\) However, an inevitable scar remains on the chest wall when harvesting rib cartilage; thus, scaring is a major complication in rib cartilage rhinoplasty.\(^4\) For female patients, the incision is generally made along the inframammary fold (IMF) line.\(^1,2\) Female Asian patients frequently complain of both a low and short nose and small breasts; therefore, simultaneous rib cartilage rhinoplasty and inframammary breast augmentation is increasing in popularity. Herein, we introduce a newly developed scar-minimizing method utilizing the predicted new IMF line to harvest rib cartilage and perform inframammary breast augmentation concurrently through one single incision. Moreover, a
SUBCUTANEOUS flap (called an ‘interspace wall flap’) is used to isolate the surgical spaces, reducing complications.

SURGICAL TECHNIQUE: The interspace wall flap is made between the two surgical spaces and is composed of Scarpa’s fascia, deep fat, muscle fascia, and muscle. Because the interspace wall flap is strongly attached to the 5th and 6th rib cartilage and intercostal muscle, the two surgical spaces are completely isolated.

RESULTS: This method has been evaluated in 31 patients (27 with primary breast augmentation, 4 with revisional breast augmentation) who underwent both operations simultaneously. At the current follow-up duration (ranging from 2 to 12 months), all patients are satisfied with the scar, and there have been no complications.

CONCLUSION: The innovative method described above addresses two key issues in simultaneous augmentation rhinoplasty and breast augmentation. First, scaring is minimized by using the same incision for harvesting rib cartilage and performing breast augmentation. Second, an interspace wall flap is used to completely isolate the implant pocket space from the harvesting rib cartilage space, preventing potential complications associated with using the same incision line.

Thus, this method appears to be promising for simultaneous augmentation rhinoplasty and inframammary breast augmentation.

REFERENCES:
1. Gunter JP, Cochran CS, Marin VP. Dorsal augmentation with autogenous rib cartilage. Semin Plast Surg. 2008;22:74–89.
2. Marin VP, Landecker A, Gunter JP. Harvesting rib cartilage grafts for secondary rhinoplasty. Plast Reconstr Surg. 2008;121:1442–1448.
3. Toriumi DM, Pero CD. Asian Rhinoplasty. Clin Plast Surg. 2010;37:335–352.
4. Wee JH, Park MH, Oh S, Jin HR. Complications associated with autologous rib cartilage use in rhinoplasty. Facial Plast Surg. 2015;17:49–55.

Co-Authors: Johnny Nelson, MD; James Whaley, MD; Ephraim M. Zinberg, MD

Affiliation: Wayne State University School of Medicine, Detroit, MI

PURPOSE: Hand diagrams were first studied in 1990 by Katz et. al. as a diagnostic tool, but the use of the hand diagram as an epidemiologic investigational tool has not been thoroughly explored. The compiling and tracking of patient perceived data can also be used to establish clinically relevant normative data. We explore a novel method of patient reported symptom mapping to establish and compare the normative distribution of painful and non-painful symptomatology in patients diagnosed with median neuropathy.

METHODS: New patients were given a visual questionnaire consisting of a photo of human hand and wrist and a superimposed numbered grid. Patients were instructed to map their symptoms, painful symptoms noted with an “X” and non-painful sensory disturbance (i.e. numbness or tingling) noted with an “O.” Patients were instructed not to put marks where they lacked any symptoms. Grid cells could contain both an “X” and an “O.” All patients were then evaluated by a single, hand fellowship trained surgeon, who was blinded to questionnaire results, and a visit diagnosis was made. Questionnaires of patients with an isolated clinical diagnosis of carpal tunnel syndrome were compiled for inclusion in the study. Those with any conflicting or confounding diagnoses (e.g. symptomatic osteoarthritis, tendinosis, recent trauma) in the same limb were excluded. The frequency with which patients marked either painful or non-painful sensory disturbance was tallied and recorded for five discrete anatomic areas: the volar forearm (zone 1), carpal tunnel (zone 2), distal palmar (zone 3), radial three digits (zone 4), and ulnar two digits (zone 5). A frequency score was calculated by dividing the total number of marks in that symptom area across all patients by the total number of marks made by all patients. Photo-editing software was then used to create a visual frequency distribution for both painful sensation and non-painful sensory disturbance. Higher frequencies of marks by the study population were depicted by darker shades for each cell.

RESULTS: A total of 34 hands in 26 patients were included in the study. Painful symptoms were clearly centered over the carpal tunnel with a frequency score of 46%. Painful symptoms in the digits were reported less frequently with scores of 23% and 0.3% for the radial and ulnar digits, respectively. Non-painful sensory

Where Does It Hurt? The Distribution of Painful and Non-Painful Sensory Disturbances in Carpal Tunnel Syndrome

Presenter: Mitchell Gauger, BS