Affiliation: University of Pittsburgh Medical Center, Pittsburgh, PA

BACKGROUND: The leadership and teams involved in the different aspects of burn care vary greatly by hospital and country.¹⁻⁴ With current changes in training requirements, it is important to understand the venues in the United States for a general surgery (GS) and plastic surgery (PRS) resident interested in pursuing a burn surgery career. The aim of this study was to evaluate the current state of leadership and care in burn centers across the United States and the training requirements to secure a burn surgery position.

METHODS: A cross-sectional study was conducted between August and September 2017. A 12-question survey was sent to all Burn Unit Directors in the United States. Directors were queried about their training and who manages various aspects of burn care at their respective hospitals, including immediate assessment, airway and ventilation, cardiovascular support, fluid resuscitation, antibiotics, daily critical care, surgical care, and wound care.

RESULTS: A total of 55 responses (47% response rate) were received from Burn Unit Directors. Burn Units are lead most commonly by physicians who received general surgery training (69%), but interestingly the majority either did not undergo fellowship training (31%) or completed a burn surgery fellowship (29%). While surgical care (GS=51%, PRS=42%) and wound care (GS=51%, PRS=42%) were predominantly managed by general or plastic surgery-trained burn teams, management of every other aspect of burn care (ventilation, cardiovascular support, fluid resuscitation, antibiotic therapy, and daily critical care) varied greatly depending on the institution, demonstrating that a shift in burn care management is occurring. This is also reflected in the desired characteristics for recruitment listed by Burn Unit Directors requiring general surgery (67%) or plastic surgery residency (44%). and a burn surgery (55%), trauma surgery (15%), or critical care (44%) fellowship.

CONCLUSION: Our study demonstrates that while leadership in burn surgery is dominated by general surgery-trained physicians, the surgical and wound care responsibilities are shared among plastic and general surgeons. However, other aspects of burn care have also become increasingly multidisciplinary in nature and are often managed by critical care. Although one third of current Burn Unit Directors did not undergo fellowship training, our study showed that aspiring surgeons are advised to obtain a burn surgery and/ or critical care fellowship.

REFERENCES:

- 1. Reimel BA, Klein MB, Nathens AB, Gibran NS. Delivery of critical care in North American burn centers. *Journal of burn care & research: official publication of the American Burn Association.* 2008;29(5):713–717.
- Al-Mousawi AM, Mecott-Rivera GA, Jeschke MG, Herndon DN. Burn Teams and Burn Centers: The Importance of a Comprehensive Team Approach to Burn Care. *Clinics in plastic surgery*. 2009;36(4):547–554.
- Shahrokhi S, Jindal K, Jeschke MG. Three components of education in burn care: surgical education, inter-professional education, and mentorship. *Burns: journal of the International Society for Burn Injuries*. 2012;38(6):783–789.
- 4. Zhanzeng F, Yurong Z, Chuangang Y, et al. Basic investigation into the present burn care system in China: burn units, doctors, nurses, beds and special treatment equipment. *Burns: journal of the International Society for Burn Injuries.* 2015;41(2):279–288.

Functional Reconstruction of Lower Lip with Free Split Rectus Abdominis Muscle Flap

Presenter: Nuh Evin, MD

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

Affiliation: Selcuk University, Konya

PURPOSE: The lips are very important aesthetic and functional unit of the face during articulation, mastication, smile, kissing and oral competence.¹ Reconstruction of the lips should ensure both function and aesthetic appearances without any disturbing of the face.^{1,2} In this study, we present functional reconstruction of the lower lip with free split rectus abdominis muscle flap.

MATERIAL AND METHODS: Between 2014 and 2016 years, 3 patients were operated for squamous cell carcinoma (SCC) of lower lip. Before surgery, patient's medical records were reviewed for age, sex, previous treatment, size and localization of affected area, neck metastasis. Initial surgical resection was performed with wide surgical margine. After resection, the patients had 50%,75%,100% defects of the lower lip, respectively. A vertical incision was made on the linea semilunaris of the abdomen, sheath of the rectus muscle was disected from upper and lower tendinous

intersections. Course of the intercostal nerve of the dissected third page was identified from the T7 to T12 thoracic intercostal nerve with electromyograph(EMG). The medial part of the dissected muscle page was elevated with this intercostal nerve and medial perforators of the deep inferior epigastric vessels.³ Flap was folded in length and inserted to the lower lip defect. Anastomoses were completed to the ipsilateral facial artery, epigastric vein and marginal mandibular branch of the facial nerve. The muscle flap was completely covered with skin graft. Donor side was closed primary. Lower lips were evaluated with physical examination including oral competans and drolling, sensory examination with Semmes Weinstein Monoflament tests and functional examination with EMG. Patients were followed for 18 month, 25 month and 38 month respectively.

RESULTS: Two patients were male, other was female. Ages of them were 64, 79 and 83 years old. There was no complication after free flap surgery. While all flaps were bulky at the first 3 month, dimensions of flaps reduced to 12th months. Color differantion with surrounding tissues, drooling and articulation problem was improved three months after surgery. Motor innervation and sensation of the reconstructed part was acceptable after 12th month after surgery. There was no abdominal hernia and bulging, limitation of trunk flexion and extansion in all patients. All patients were satisfied with final appearance. The donor area scar was ignored by patients.

CONCLUSION: Various flap options have been reported for aesthetic and functional reconstsuction of large full thickness defects of lower lip.^{1,2} The free partial medial rectus muscle flap is also an alternative flap for fullthickness large defects of lower lip with good aesthetic and functional results, preserving function of the abdominal muscle.

REFERENCES:

- 1. Jallali N, Malata CM. Reconstruction of concomitant total loss of the upper and lower lips with a free vertical rectus abdominis flap. Microsurgery. 2005;25(2):118–20.
- Ninkovic M, Spanio di Spilimbergo S, Kim Evans KF, Ninkovic M. Lower lip reconstruction using a functioning gracilis muscle free flap. Semin Plast Surg. 2010 May;24(2):212–8.
- 3. Buntic RF, Brooks D. Free partial medial rectus muscle flap for closure of complex extremity wounds. Plast Reconstr Surg. 2005 Oct;116(5):1434–7.

Can Same Local Mucosal Tissue be Used for Recurrent Palatal Fistulas?

Presenter: Seyda Guray Evin, MD

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

Affiliation: Selcuk University, Konya

PURPOSE: The purpose of this study is to obtain clues about the quality and usability of peri-fistular local tissue in recurrent fistulas operations from the results of patients who have undergone fistula surgery.

MATERIALS AND METHODS: In this retrospective study, 53 fistula repair operations performed between 2009 and 2016 were classified as group 1 (successful results, n:33) and group 2 (unsuccessful results, n:20). These groups were subgrouped as operated by using local tissues (local tissue group, LTG), and using regional tissues (regional tissue group, RTG). Regional tissue group has been excluded from the study. Peri-fistular local tissue was investigated from intraoperative photos for all patients. Perifistular tissues scored according to, presence of a whiter tissue different from the normal palatal mucosa like scar tissue (there is:1 point, there isn't: 0 point), clearing of the palatal rugas (there is: 1 point, there isn't: 0 point), the presence of a flatter and thin palatal tissue around the fistula (there is: 1 point, there isn't: 0 point). 26 of group 1 were treated using local tissues. It was seen that the 22 of patients had up to 1 point mentioned above. 17 of the group 2 were treated using local tissues. It was seen that the 9 of patients had up to 1 point mentioned above.

RESULTS: 53 fistula operations performed in 43 patients were evaluated. Patient's ages ranged from 2 to 45 years with a mean age of 20.4 years. Twenty of these patients were male and 23 were female. After the groups were designed as mentioned above, Chi-Square test analysis results were obtained with the Spss15.0 program. According to this; the success rate is 7.7% in patients had 2 or more points. This rate was 72.7% when the patients had 1 or less points.

DISCUSSION: The incidence of fistula after primer palatoplasty ranges between 15–65%¹. Any unsuccessful surgery applied to the fistulas not only may result in formation of larger fistulas, but also may not provide adequate occlusion due to the contraction phase of wound healing. When choosing the fistula repair method, it will be helpful for us to examine the local tissue condition in addition to the factors such as the type of fistula, localization, age of the patient, and patient's compliance. According to factors that mentioned above, it can be say, 2 or more point means that using of the local tissues to cover a fistula will most likely to fail. It is more rational to use regional or distant tissue in such situations.