12th Annual Otolaryngology Literature Update
Facial Plastic & Reconstructive Surgery

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Michelle S. Hwang, M.D. is a facial plastic and reconstructive surgeon and assistant professor in the Department of Otolaryngology - Head and Neck Surgery. She is originally from Chicago, IL and completed her bachelor's degree at the University of Illinois at Urbana-Champaign. She earned her medical degree at the University of Illinois at Chicago. Dr. Hwang then completed her residency training at Johns Hopkins Hospital in Baltimore, MD.

Dr. Hwang continued into fellowship training in facial plastic and reconstructive surgery and microvascular reconstruction at Thomas Jefferson University Hospital in Philadelphia, PA. Her clinical interests include facial paralysis, facial reconstruction, cosmetic surgery, facial trauma, functional and cosmetic rhinoplasty, and hair restoration. She believes in patient-centered care and working together with the patient for the best outcome.

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Derakhshan A, Shaye D, McCarty JC, Nellis J, -Lyford Pike S, Hadlock TA, Gadkaree SK. Surgical Management of Facial Paralysis: Demographic and Socioeconomic Associations. Facial Plast Surg Aesthet Med. 2023 Mar-Apr;25(2):165-171. doi: 10.1089/fpsam.2021.0353. Epub 2022 Sep 13. PMID: 36099197.

Echanique KA, Kerr R, Kim I, Keller G, Nabili V. Assessment of Tranexamic Acid in Reducing Intraoperative Blood Loss During Rhytidectomy. Laryngoscope. 2022 Jan;132(1):3-5. doi: 10.1002/lary.29545. Epub 2021 Apr 7. PMID: 33826143.

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HEADER

Literature Course 2023

Facial Plastics Division:

1. *Assessment of Tranexamic Acid in Reducing Intraoperative Blood Loss During Rhytidectomy*
2. *Surgical Management of Facial Paralysis: Demographic and Socioeconomic Associations*

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Assessment of Tranexamic Acid in Reducing Intraoperative Blood Loss During Rhytidectomy

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Background

- Hematoma is common risk of facelift, occurring in 1-15% of cases, usually within the first 24 hours. Can result in skin necrosis, contour deformity, pigmentary changes
- Multiple methods have been used to decrease bleeding, including tumescent with epinephrine, careful cautery, placement of post-operative drains and compression dressings
- Tranexamic Acid: antifibrinolytic agent that stops clot breakdown

Assessment of Tranexamic Acid in Reducing Intraoperative Blood Loss During Rhytidectomy

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Review of Literature:

- First described topical use in 2016, one post-operative hematoma and no VTE
- Cohen et al: randomized double blinded case control
  - Patients given either 1g TXA given IV vs saline
  - Non-significant decreased intraoperative bleeding. Significant surgeon scored decrease in ecchymosis and submental fluid collection
  - Patient rated edema and ecchymosis, surgeon rated edema were not found to be different
- Couto et al: TXA in tumescence, no change in time to hemostasis
- Kochuba: 1g vs 2g TXA in tumescence showing higher dose had shorter time to hemostasis
- Schroder and Langsdon: 1g TXA in every 10 cc lido-epi resulted in reduced post-op drain output, decreased duration of drains, decreased intra-op blood loss

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Best Practice

- Administration of TXA needs more studies, as methods of delivery and outcome measures are heterogeneous

Assessment of Tranexamic Acid in Reducing Intraoperative Blood Loss During Rhytidectomy

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Surgical Management of Facial Paralysis: Demographic and Socioeconomic Associations

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Background

- Surgical treatment options for FP are expanding and becoming more complex
- Study aims to determine demographic/socioeconomic factors associated with FP patients who undergo surgery

Methods

- 2016 Healthcare Cost and Utilization Project State Inpatient Databases and State Ambulatory Surgery Services Database from FL, NY, MD, KY, NC, NV
- Identified ICD-10 codes for facial palsy (G51.0, G51.8, G51.9) and relevant CPTs
  - CPTs stratified as periocular (tarsal strip, direct brow, eyelid weight) or smile (TTT, gracilis, fascia graft)
- Index of care (IOC) setting (ambulatory or inpatient) was noted for each surgery

Surgical Management of Facial Paralysis: Demographic and Socioeconomic Associations
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Results

- 20218 patients had facial palsy diagnosis in 2016 SID/SASD databases
- 434 underwent periocular surgery, 136 underwent smile surgery
- Significant findings:
  - Female patients, Medicaid, self-payers, black patients, and rural patients less likely to undergo surgery less likely to have surgery

Discussion: unclear causes as to disparities, likely combination of surgery not being offered as much or patients self select

- Race: black patients half as white patients to undergo surgery for FP
- Insurance: self-pay and Medicaid significantly less likely to undergo surgery
- Gender
- Surgery Setting
  - Prior studies found that higher SES more likely to be treated in ASC vs inpatient setting
  - This study found that higher SES more likely to be treated inpatient

Table 6. Multivariable logistic regression analysis of factors influencing smile surgery for patients with facial paralysis

Variable	*Odds ratio (95% confidence interval)*	p*
Age	0.99 (0.98–1.01)	0.84
Gender (ref: male)	0.71 (0.50–1.00)	0.055
Female		
CCI (ref: 0)		
1	0.41 (0.23–0.76)	**0.004**
2 or more	0.79 (0.53–1.19)	0.26
Payer (ref: Medicare)		
Medicaid	0.88 (0.43–1.76)	0.71
Private	1.68 (1.06–2.67)	**0.027**
Self-pay	0.26 (0.034–1.91)	0.18
Other	3.21 (1.48–6.95)	**0.003**
Race (ref: white)		
Asian	1.40 (0.56–3.52)	0.47
Black	0.51 (0.27–0.96)	**0.039**
Hispanic	1.02 (0.57–1.85)	0.93
Other	1.68 (0.90–3.13)	0.10
Income (ref: <$43,000)		
$43,000–$53,999	0.94 (0.55–1.62)	0.83
$54,000–$70,999	1.12 (0.65–1.95)	0.68
>$71,000	2.17 (1.30–3.61)	**0.003**
Residential area (ref: large metropolitan area)[a]		
Small metropolitan area	0.81 (0.52–1.27)	0.36
Micropolitan	0.94 (0.46–1.90)	0.85
Rural	0.25 (0.06–1.05)	0.058

[a]Large metropolitan area: >1,000,000 people; small metropolitan area: between 50,000 and 1,000,000 people; Micropolitan: between 10,000 and 49,999; rural: <10,000.
*p-Values <0.05 were considered statistically significant and are indicated in bold.

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Conclusions

- Decision to pursue surgery for facial paralysis is tied to multiple demographic and SES factors