lip shortening. All patients reported significant softening appearance or feminization post op. Sixty five patients had multiple procedures at one operation and 50% had one touch up procedure at least within 6 months post op; of those who had single procedure only 6 had a need for corrective surgery. None had acute sinusitis, meningitis, airway obstruction, permanent facial nerve palsy or major mental nerve damage. Cheek implant infection appeared in four patient which was followed by removal of the implants. Scar widening/hair loss on scalp was the biggest side effect in supraborbital reduction and noticed in 10% of patients at different degrees. The best approach in this case was hair transplant.

CONCLUSION: Aesthetic craniofacial surgical procedures for FFS are effective and safe and can significantly feminized or soften patient appearance. Single procedure approach is much easier to control and recommended for those who like to implement these methods.

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Effect of Botulinum Toxin Injection Intervals on the Irreversibility of Targeted Muscle Paralysis: An Electromyographic Study

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BACKGROUND: Botulinum toxin (BT) has a multitude of clinical uses. An important drawback, however, is its short-lived action and the corresponding requirement for a schedule of re-injection in order to maintain therapeutic effect. This results in significant cost and patient inconvenience. Anecdotal reports suggesting that repeated use of BT prolongs its effect have not been substantiated by scientific examination. Clinical models of peripheral nerve transection demonstrate irreversible denervation and muscle atrophy if nerve repair and recovery does not occur prior to 12–24 months.

PURPOSE: To investigate, using electromyographic (EMG) analysis and clinical assessment, whether repeated, short-interval injection of BT over a prolonged period of time will yield irreversible targeted glabellar muscle paralysis.

METHODS: Study participants (19 Caucasian females, 38–59 yrs) presented with at least moderate glabellar lines at maximum frown, determined by the “Photonumeric Guide to Assessing Glabellar Line Severity” (Allergan Inc.). Subjects were randomly assigned to receive treatment either q6 weeks (Group I), q9 weeks (Group II), or q12 weeks (group III).

Treatment consisted of five injections of BT (20U total) administered to the glabellar muscles.

Study duration: 3 years (treatment phase 0–108 weeks; follow-up phase 108–156 weeks).

Paired sample t-testing and ANOVA was used to determine significance (p<0.05).

OUTCOMES MEASURED: Serial (EMG) studies of corrugator muscle were performed prior to the first and second injection, at week 72, week 108, and during the post-treatment follow-up phase at weeks 120, 132, and 156.

RESULTS: Compared to baseline, the 3 treatment groups demonstrated significant reduction in corrugator EMG activity at all study time points. By 72 weeks, q6 and q9 groups experienced significant reduction compared to q12 group (p<0.05). At 108 weeks and subsequent time points, there were no significant differences between the groups. Moreover, while a modest recovery trend was noted both electromyographically and clinically, EMG recovery during the 48-week post-treatment phase was not found to be statistically significant.

CONCLUSIONS: By conducting a 3-year study, including 2 years of short-interval targeted BT injections and 1.1 year of EMG follow-up, we have demonstrated a meaningful reduction in muscle activity that tended to persist over the 1-year follow-up period. Shorter injection interval tended to result in greater reduction in activity. Further investigation with larger sample size and longer follow-up assessment is warranted.

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REFERENCES:
1. Flynn TC. (2010) Botulinum toxin: examining duration of effect in facial aesthetic applications. American J. Dermatol. 11(3):183–99
What Is the Lobular Branch of the Great Auricular Nerve? Anatomical Description and Significance in Rhytidectomy

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INTRODUCTION: Recent literature describes a distinct third branch of the great auricular nerve (GAN) named the lobular branch. Studies demonstrate preserving the lobular branch of the GAN has greater impact on sensory function at the auricle than preservation of the posterior branch during rhytidectomy.1,2 However, no methodology exists to efficiently and accurately determine the topographic location of the lobular branch. This study described the branching characteristics of the lobular branch and algorithmic surface markings to assist surgeons in preservation of this nerve during rhytidectomy flap elevation.

MATERIALS AND METHODS: The lobular branch was dissected bilaterally in 50 cadaveric necks. Measurements were taken from the lobular branch to conchal cartilage, tragus, and antitragus. The anterior branch was measured to its SMAS insertion and the posterior branch was measured to the mastoid process. McKinney’s point was marked and the GAN diameter was recorded. Branching pattern and location of branches within the Ozturk 30-degree angle were documented. Basic statistics were performed. A student’s t-statistic was used to compare male and female GAN diameter difference.

RESULTS: The anterior, posterior, and lobular branches were present in all specimens. In comparing nerve diameter between males and females a highly significant difference was identified (t=-2.780, p<0.01). The most common origin of the lobular branch was from a trifurcation with the anterior and posterior branches. The lobular branch always terminated in the lobular area, but may send accessory branches to the pre-auricular area or posterior inferior auricle. In 85% of specimens, the lobular branch resided directly inferior to the antitragus and in the remaining specimens it was located directly inferior to the tragus. Preoperative markings consisting of two vertical lines from the tragus and antitragus to McKinney’s point can be used to outline the predicated location of the lobular branch.

CONCLUSION: This study delineated the location of the lobular branch of the GAN. We translate these findings into a quick and simple intraoperative marking, which can assist surgeons in avoiding the lobular branch injury during rhytidectomy dissection.

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REFERENCES:
1. Hu J, Ye W, Zheng J, Zhu H, Zhang Z. The feasibility and significance of preservation of the lobular branch of the great auricular nerve in parotidectomy. International journal of oral and maxillofacial surgery. Jul 2010;39(7):684–689.
2. Zumeng Y, Zhi G, Gang Z, Jianhua W, Yinghui T. Modified superficial parotidectomy: preserving both the great auricular nerve and the parotid gland fascia. Otolaryngol Head Neck Surg. 2006;135(3):458–462.

Reconstructive Session 2

Vaginal Reconstruction with Interdigitating Y-flaps in Women with Transverse Vaginal Septa

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INTRODUCTION: Transverse vaginal septa are rare congenital disorders of sex development, whose surgical management involves varying degrees of vaginal reconstruction.3 While thicker septa require complex reconstruction with local flaps, muscle flaps, or bowel transposition, thin septa have traditionally been managed by simple excision of the septal tissue and anastomosis of the vaginal ends. This not only shortens the vagina, it also produces a circular scar, which