including the upper lip dermis, orbicularis and modiolus. These findings are critical and should be taken into consideration when reconstructing upper lip wounds. From an aesthetic standpoint, attention should be especially focused on the philtrum, Cupid’s bow and vermilion border. Different reconstruction methods are available including primary closure, skin grafts and local flaps specific to the upper lip, such as the Abbe, Estlander, Karapandzic and Bernard-Burow flaps. An algorithmic approach of upper lip reconstruction is provided based on the size and location of the defect. Primary closure may be used to repair defects less than 1/3 of the upper lip. Defects larger than 1/3 usually require the use of a local flap. The Abbe flap is suitable for reconstruction of upper lip defects up to 2/3 involving the philtrum. The Estlander may be used for defects up to 2/3 involving the commissure. Central defects up to 2/3 can be reconstructed with a Karapandzic flap. Defects larger than 2/3 usually require utilization of the Bernard-Burrow flap or a different modified cheek flap or free tissue transfer.

CONCLUSION: Knowledge of the mechanics and special characteristics of available reconstructive options is crucial for optimal aesthetic and functional outcomes. A summary of all reconstruction methods is provided based on the ability to restore philtrum anatomy, upper lip animation and skin sensation.

Analysis of Lost Work Days from Symptomatic Macromastia

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INTRODUCTION: Women with symptomatic macromastia often complain of back and neck pain, headaches, shoulder grooving and upper extremity numbness.1-3 Such symptoms are responsible for a significant number of lost work days per year adding an economic burden to women with macromastia.

METHODS: A prospective cohort study was performed to evaluate the number of lost work days resulting from back or neck pain when women with symptomatic macromastia were managed with nonsurgical versus surgical treatment. Working women with symptomatic macromastia were requested to prospectively record the number of days lost from work as a result of back or neck pain associated with their large breasts during the 6 months period of conservative management required by their managed care medical policy. The conservative management included physical therapy, weight loss and analgesics. A reduction mammoplasty was approved and performed in all the women following the period of conservative management. After the women returned to work, they were again requested to record the number of lost work days associated with back or neck pain. Comparison between the number of lost work days with conservative management versus surgery was performed. Data collection included demographic questions as well as bra cup size, height, weight, level of education and employment. The gender-specific median wage rates from the Bureau of Labor Statistics were used to estimate the economic value of lost work days annually. The difference between groups was evaluated using Student’s t-test or Chi-square test, whichever was appropriate, with a p-value of less than 0.05 being considered significant. This study was approved by the Institutional Review Board.

RESULTS: The study evaluated 128 women with symptomatic macromastia. The mean age was 32 ± 10, the mean body mass index was 29 ± 4, mean bra size was 38-D, 45% had a college degree or higher, and 90% had full-time employment. The mean number of lost work days was 6 ± 3 with conservative and 1 ± 1 with surgical management in a 6 months period, a difference that was statistically significant (p<0.05). Based on gender-specific median wage rates from the Bureau of Labor Statistics, this represents an economic loss of $1,497 annually per woman in conservative management.

CONCLUSION: Women with symptomatic macromastia have significantly fewer days lost from work when a reduction mammoplasty is performed. Conservative management results in a higher cost in loss productivity.

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Interpositional Jump-Graft Using a Hybrid Artificial Nerve-Conduit with Adipose-Derived Stem Cells for Rat Facial Nerve Paralysis Model

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PURPOSE: Facial nerve paresis such as Bell’s palsy and Hunt’s syndrome appears suddenly in healthy individuals and recovers by conservative treatments in some cases. However, a non-recovery situation considerably reduces the quality of life of patients. Interpositional jump-graft (IPJG) technique with the hypoglossal nerve for supercharging can be applied in the case and becomes the subjects of many clinical reports. However, in IPJG case, an autologous nerve is required, and the donor site morbidity is unavoidable. Bio-degradable nerve conduits are made from polyglycolic acid (PGA) and used recently without donor site complications after providing autologous grafts. Hybrid artificial nerve conduits with adipose-derived stem cells (ASCs) also attract attention as a nerve-regeneration enhancing agent. This study used hybrid artificial nerve conduits to obtain IPJGs closely similar to autologous nerve grafts.

MATERIALS AND METHODS: A ligature clip was used to crush the facial nerve trunk, thereby creating a partial facial nerve paresis model. A 10-mm-long biodegradable artificial nerve-conduit containing ASCs used to create an IPJG between the facial nerve trunk and the hypoglossal nerve (Hybrid PGA group). Thirteen weeks after the surgery, the outcome was physiologically compared with conventional IPJG with autograft using the greater auricular nerve (autograft group), non-ASCs artificial nerve group (PGA group) and non-treated group (control group).

RESULTS: Compound muscle action potential amplitude was highest in the autograft group (4352±1587 μV), followed by the Hybrid PGA group (3224±1778 μV), PGA group (1960±445 μV), and then control group (687±490 μV). In the Hybrid PGA group, amplitude was significantly higher than in the PGA group (P < 0.05). Myelin thickness of autograft group (0.79±0.03 μm) was significantly higher than that of Hybrid PGA group (0.68±0.29 μm) (P < 0.01), and that of Hybrid PGA group was significantly higher than that of PGA group (0.44±0.03 μm) (P < 0.01). Autograft, PGA, and Hybrid PGA groups showed a myelinated nerve regeneration with double innervation in hypoglossal and facial nerve nuclei for vibrissal muscle.

CONCLUSION: This study found that a conventional IPJG technique with an autologous nerve can be substituted with a hybrid artificial nerve-conduit with ASCs in a rat model with partial facial nerve paresis.

Prediction of Resection Weight in Reduction Mammaplasty: Validation of the Galveston Scale

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INTRODUCTION: Reduction mammaplasty (RM) is one of the most commonly performed plastic surgery procedures. Prediction of resection weight is important both for the patients and the surgeons. Current literature suggests that symptomatic relief does not correlate with resection weight, however, insurance carriers are still using resection weight as one of the most important criteria to determine medical necessity. A number of prediction scales have been proposed, none of which are validated and widely accepted. The purpose of our study was to assess the validity of current scales in our patient population and propose a more accurate tool for prediction of resection weight.

METHODS: A retrospective chart review of patient that underwent reduction mammaplasty at the University of Texas Medical Branch from 2012–2017 was performed. Multiple regression analyses were applied to all patients...