TRACK: AESTHETIC
Abdominal Plication & Postoperative Venous Thromboembolic Events Following Abdominal Body Contouring: A Propensity Score Matching Analysis

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PURPOSE: Venous thromboembolic events (VTE) such as deep venous thrombosis (DVT) and pulmonary embolism (PE) are rare but potentially devastating complications of abdominal body contouring procedures. With an incidence of around 1%, the VTE rate in these surgeries is significantly lower than that of other surgical specialties but remain a significant cause of morbidity and mortality.1, 2 Rectus abdominis plication, a commonly utilized method to reduce diastasis width, has been associated with increased intra-abdominal pressure.3-5 Though concerns that this increased intra-abdominal pressure may lead to increased DVTs and subsequent PEs exist, there is a lack of literature investigating associations between the two in abdominal contouring procedures and we aim to bridge this gap in knowledge.

METHOD: A retrospective review was conducted for all patients who underwent abdominal body contouring procedures at Montefiore Medical Center between 2010 and 2020. Cases were defined as patients who experienced a postoperative venous thromboembolic event and were matched to controls in a 1:4 ratio using the propensity score matching technique. Patient factors of note included demographic data, operative details, ASA, Charlson comorbidity index, and Caprini scores. Postoperative complications were collected for all patients. Parametric, nonparametric, and multivariable regression modeling was utilized for analysis.

RESULTS: A total of 1192 patients underwent abdominal contouring procedures, 19 (1.59%) experienced a postoperative venous thromboembolic event and were matched to 76 controls. The overall cohort was 92.6% female (n=88) with the average age, Charlson comorbidity index, BMI, and operative time being 44.99 year, 1.38 point, 30.25 units, and 284.69 minutes, respectively. Mean BMI differed significantly between cases and controls (32.1 vs. 29.8, p=0.046); and cases were more likely to have a prior history of cerebrovascular events (OR: 3.45, p=0.026). Additionally, patients with postoperative VTEs were more likely to have received intraoperative blood transfusions (OR: 13.88, p=0.005). Postoperatively, cases had significantly longer lengths of stay (6.21 vs. 1.21, p=0.006) and a much longer duration of chemophylaxis (6.05 vs. 1.46, p=0.015). Cases were significantly more likely to experience concurrent complications including infection, delayed wound healing, and umbilical necrosis (p<0.001, p=0.044, p=0.044 respectively). Plication was not associated with VTE outcomes.

CONCLUSION: This study demonstrates that abdominal plication does not increases the risk of VTEs after controlling for potentially predisposing factors via propensity score matching. However, in patients who do experience VTEs, further caution must be exercised as there is an increased likelihood of concurrent complications that may further complicate the postoperative course.

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TRACK: MIGRAINE – PERIPHERAL NERVE
Targeted Muscle Reinnervation is an Effective Treatment for Refractory Symptomatic Neuromas in Non-amputee Patients

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PURPOSE: Symptomatic neuromas can be debilitating and hinder quality of life. Targeted muscle reinnervation (TMR) is increasingly being employed to prevent or treat neuromas and phantom limb pain in amputee patients. We previously reported successful pain outcomes in a small cohort of non-amputee patients with symptomatic neuromas who underwent TMR. We now have 2.5 years of experience with this procedure. The goal of this study is to evaluate the patient-reported outcomes and complications of using TMR to treat symptomatic neuromas in nonamputee patients.

METHOD: A retrospective review was conducted of patients with symptomatic neuromas treated with TMR from January 2019 to October 2021 at a single institution. Patients' medical records were reviewed to identify neuroma characteristics, TMR details, and postoperative follow-up. Neuromas were excised to healthy nerve fascicles and a redundant donor motor fascicle was selected for nerve transfer. Phone surveys were conducted to evaluate pain frequency and severity, physical function, and quality of life before and after TMR. Pain severity, physical function, and quality of life were assessed on a scale of 0 to 10. Pain frequency was based on number of times per day and number of days per week patients experienced pain. Statistical analysis was performed to compare pre- and postoperative scores, with statistical significance defined at values of $p < 0.05$.

RESULTS: Thirty patients were identified. Average age and body mass index were 52.4 years and 33.7 kg/m2, respectively. Fifteen patients (50%) had undergone a prior neuroma excision. Neuromas were located in the lower extremity (n=17, 56.7%), upper extremity (n=8, 26.7%), and trunk (n=5, 16.7%). At mean follow-up of 11.1 months (range 1.9 to 24.1 months), pain frequency decreased from 6.8 days per week to 4.7 ($p<0.001$) and from 9.2 times per day to 6.1 ($p<0.001$). Average pain severity decreased from 8.4/10 to 5.5/10 ($p<0.001$). Overall physical function increased from 3.6/10 to 5.8/10 ($p=0.004$) and overall quality of life increased from 4.2/10 to 6.2/10 ($p=0.002$).

CONCLUSION: TMR is a promising surgical treatment for symptomatic neuromas. Our study cohort benefited from decreased pain, improved physical functioning, and better quality of life. Larger studies are warranted to further elucidate the advantages of TMR in non-amputee patients with symptomatic neuromas.

TRACK: AESTHETIC

Productivity and Efficiency of a Departmental Resident Aesthetic Plastic Surgery Clinic

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PURPOSE: The number of aesthetic surgery procedures performed in the United States has consistently grown over the past several decades, with the most recent annual expenditures totaling over $9 billion. Despite this increasing demand, plastic surgery residency programs have found it challenging to provide comprehensive training in aesthetic surgery to fulfill ACGME requirements (150 aesthetic procedures). Prior studies evaluating institutional experiences in resident aesthetic clinics have been limited by sample size. Here we present our experience with productivity and efficiency of a resident aesthetic clinic at the NYU Hansjörg Wyss Department of Plastic Surgery and highlight its potential impact on the competency of graduating plastic surgery residents.

METHOD: We performed a retrospective chart review of all adult surgical patients who presented to the NYU Aesthetic Surgery Clinic in 2021. Patient demographics, comorbidities, consultation/procedural data, and postoperative complications were used to generate descriptive statistics using SPSS Statistics. Conversion rate (the number of consults which subsequently underwent a procedure), as well as complication and revision rates were calculated. Cases were indicated, performed and followed postoperatively by residents with dedicated attending surgical supervision and anesthesia care.

RESULTS: A total of 407 consultations (380 patients) met inclusion criteria and were included in the study. Of these, 171 consultations underwent a procedure (42% conversion rate) and 464 distinct surgical procedures were performed. Patients were predominantly female (94.5%) and in relatively good health (3.9% diabetes, 6.6% active smokers). The cohort had an average age and BMI of 49.3 +/- 13.6 years and 27.1 +/- 5.2 kg/m2, respectively. Face and neck procedures (55.8%) accounted for the majority, followed by breast (22.2%) and body contouring (22.0%). The most common