QS5

Extended Venous Thromboembolism Prophylaxis May Not Be Necessary For DIEP Flap Breast Reconstruction

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Purpose: Based on the 2005 Caprini Risk Assessment Model (RAM) for venous thromboembolism (VTE), the American Society of Plastic Surgeons (ASPS) established prevention guidelines in 2011 recommending one week of postoperative chemoprophylaxis for patients scoring between 3 and 6 and extended anticoagulation (up to four weeks) for patients scoring 7 or higher after a major procedure. Most patients who undergo deep inferior epigastric perforator (DIEP) flaps breast reconstruction, while generally healthier than high-risk patient subgroups (e.g., head/neck cancer patients) in plastic surgery, would similarly be deemed high risk. At our institution, we avoid the blanket application of prolonged anticoagulation, and instead favor individualized regimens based on the patient’s unique risk factors and perioperative course, resulting in an overall limited use of chemoprophylaxis. The aim of this study is to describe our institutional experience in thromboembolism prevention and to assess the necessity of extended prophylaxis in DIEP flap patients.

Methods: Patients who underwent DIEP flap reconstruction from August 2011 to March 2020 by one attending plastic surgeon were included. Charts were retrospectively reviewed looking at patient demographics, VTE prophylaxis regimens, and development of postoperative complications including deep vein thrombosis (DVT) and pulmonary embolism (PE) within 60 days of surgery. Patients were considered positive for DVT or PE if diagnosed radiographically on ultrasound or CT scan, respectively. Caprini scores were calculated for all patients.

Results: 249 patients (439 flaps) were included in this study, with an average age of 50.6 and an average BMI of 27.1 kg/m². Four patients had a history of thrombotic events. In terms of indication for procedure, 237 patients had a confirmed diagnosis of breast cancer, ten had a genetic predisposition, one had a congenitally absent breast, and one required reconstruction for acquired breast deformity. Out of the 249 patients in the cohort, 245 patients received chemoprophylaxis with unfractionated heparin only during hospitalization (average length of stay, 3.3 days), while four patients were additionally anticoagulated with enoxaparin for at least two weeks after discharge. The cohort’s average Caprini score was 6.0, with 72.7 percent of patients scoring between 3 and 6 and 26.5 percent of patients scoring 7 or higher. One patient, who scored a 7 and received limited prophylaxis, developed DVT postoperatively in the left femoral and popliteal veins. There were no cases of PE. There was no significant difference in VTE rate between patients who received chemoprophylaxis consistent with ASPS guidelines (0%, n=8) and those who did not (0.4%, n=241) (p=0.86).

Conclusions: Despite our limited use of chemoprophylaxis, our overall VTE incidence of 0.4 percent is low compared to other published rates in literature. Presenting the largest institutional cohort of DIEP flap patients to date in the analysis of postoperative VTE, this current work suggests that extended prophylaxis may not be warranted, and it further serves as impetus to re-evaluate the 2005 Caprini RAM in this subgroup of plastic surgery patients.

QS6

Improvements In Perceived Age And Attractiveness Following Aesthetic Rhinoplasty Using Facial Recognition And Artificial Intelligence

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Purpose: Facial recognition software may serve as a more objective tool for measuring aesthetic improvements following facial plastic surgery. This study utilized a novel facial recognition and artificial intelligence software in order to assess perceived changes in age and attractiveness amongst patients receiving rhinoplasty.

Methods: This study was a retrospective evaluation of 3D photographs of patients who underwent aesthetic rhinoplasty
alone by the senior author (DS). Both pre- and post-operative (>12-month follow-up) Vectra 3D images (Canfield Scientific, Parsippany, NJ) were assessed using Haystack Artificial Intelligence Software (Haystack AI, New York, NY). Facial attractiveness (score 1-10) and apparent age were predicted. Paired t-tests were used to compare age and attractiveness scores before and after surgery. Multivariate linear regression was performed to identify factors associated with age and attractiveness scores.

**Results:** Forty patients receiving rhinoplasty met the study criteria (average age 48.3). Overall, rhinoplasty was associated with increases in AI-rated attractiveness (+0.58, \( p = 0.004 \)) and decreases in perceived age relative to the patient's true age (-1.62 years, \( p = 0.021 \)). Greater decreases in post-operative perceived age were achieved in patients who appeared older than their actual age pre-operatively (\( p = 0.04 \)). AI age predictions were also closer to true patient age post-operatively (+1.71 years) than they were pre-operatively (+3.33 years).

**Conclusion:** Facial recognition software was successfully implemented to evaluate improvements in perceived age and attractiveness in patients undergoing aesthetic rhinoplasty. Using this technology, patients were found to appear more attractive and younger after rhinoplasty. Additionally, age reversal was greatest among patients who appeared older than their actual age at the time of surgery.

**QS7**

**Does Genital Self-image Correspond With Sexual Health Before And After Vaginoplasty**

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**Purpose:** Improvements in mental health and quality of life are well documented for transgender patients following vaginoplasty. Patient-reported outcomes (PROs) regarding sexual health are lacking in this intervention, or have not been validated in transgender patients.

**Methods:** A community advisory board of transgender women informed an anonymous online survey utilizing PROs for those who were contemplative of (pre-) and post-vaginoplasty. They were recruited on online platforms not associated with an individual institution. Survey measures included the Female Genital Self-Image Scale (FGSIS) and Patient-Reported Outcomes Measurement Information System (PROMIS) sexual health measures. Welch approximation t-tests were performed for FGSIS and PROMIS questions using Bonferroni correction.

**Results:** 687 transgender patients pre-vaginoplasty (n = 522, 76%) and post-vaginoplasty (n = 165, 24%) responded. In PROMIS measures, the postoperative cohort reported higher ability to orgasm (\( p = 0.0003 \)), satisfaction with sex life (\( p = 0.001 \)), pleasure in sex life (\( p = 0.002 \)), use of lubricant (\( p < 0.0001 \)), and scar interfere with sexual satisfaction (\( p < 0.0001 \)). FGSIS total score was higher among postoperative patients (27.8 ± 6.0) than preoperative patients (17.8 ± 5.3) (\( p < 0.0001 \)). Using Spearman’s rho, no significant correlation between FGSIS total score and any PROMIS sub-sectional measures was observed for either cohort. 193 patients (133 preoperative, 60 postoperative) reported their responses about sex being influenced by the Covid-19 crisis.

**Conclusion:** Patients who are contemplating vaginoplasty have worse sexual health and genital self-image than those who have had vaginoplasty. FGSIS scores did not correlate with PROMIS sexual health measures when controlling for prior vaginoplasty, demonstrating that sexual health is multimodal for each individual patient.

**QS8**

**Analysis of the Whole Transcriptome in Breast Cancer Patients Undergoing Radiotherapy and Breast Reconstruction**

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