The Effects of Perioperative Hypothermia in Deep Inferior Epigastric Artery Perforator Flap Breast Reconstruction: A Multivariate Regression Analysis

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INTRODUCTION: Perioperative hypothermia (PH) conveys multiple well-recognized adverse outcomes. Thermoregulation is particularly pertinent in deep inferior epigastric artery perforator (DIEP) flap breast reconstruction due to increased exposed body surface and prolonged operative course. No DIEP-specific literature on PH incidence or associated adverse outcomes exists. We assessed risk of adverse outcomes in patients undergoing DIEP flap reconstruction between hypothermic vs normothermic groups.

METHODS: Data from DIEP patients attending a single center were retrospectively reviewed. Patient demographics, comorbidities, operative details, temperature recordings, and adverse outcomes were compared between PH (≤36.5°C) and normothermic (>36.5°C) groups. Descriptive statistics were generated using chi-square and Fisher exact tests, and multivariate regression analysis was used to estimate relative risk of adverse events, adjusted for confounders.

RESULTS: Ninety-eight patients (113 flaps; 83 unilateral and 15 bilateral), including 43 immediate, 53 delayed, and 2 concurrent immediate-alongside-delayed reconstructions were reviewed. No significant differences existed between groups in patient or procedural statistics: 57.14% of patients experienced PH. Patients with PH had higher rates of cellulitis (19.64% [n = 11] vs 2.38% [n = 1]; p = 0.011) and infection. Hypothermia was associated with cellulitis on regression analysis (odds ratio 0.094; 95% CI, 0.01 to 1.02). Only marginally significant after adjustment for confounders (odds ratio 0.094; 95% CI, 0.01 to 1.02). Thirteen cases of fat necrosis occurred in the hypothermic group and none occurred in the normothermic. PH was not associated with wound complications.

CONCLUSION: PH is a relatively common occurrence and was associated with increased rates of cellulitis and infectious incidences in this cohort. However, these associations lacked statistical significance after adjustment in regression analysis. Fat necrosis can be associated with PH. In addition, more robust studies, with inclusion of additional metrics, particularly detailing flap parameters and perforator involvement, are required.

The Future Face of Academia in Plastic Surgery: Analysis of the Demographic Composition of Plastic Surgery Residency Graduates Entering Academia

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INTRODUCTION: The purpose of this study was to evaluate trends in minority and gender representation in academia among recent plastic surgery residency graduates and determine what factors predict a future in academia.

METHODS: A cross-sectional study was conducted, measuring gender and racial diversity of recent plastic surgery residency graduates from 2010 to 2020. Results were analyzed using descriptive statistics, chi-square test, and logistic regression.

RESULTS: Data on male, female, and underrepresented in medicine (UIM) resident physicians were analyzed (n = 1,156 from 65 programs). Of the residents going into academia, 72%, 28% and 8% were male, female, and UIM, respectively. Within each group, 34%, 30%, and 30% of male, female, and UIM physicians, respectively, joined academia after residency. There was no significant difference in the propensity to join academia after residency between these groups. Although race and gender does not predict a future in academia, attendance at a more highly ranked medical school (p < 0.01) or residency program, via both Doximity (p < 0.001) and UAlabama (p < 0.001) research rankings, does predict a future in academia.

CONCLUSION: The authors examined the demographic composition of plastic surgery residency graduates between the years 2010 and 2020 and found no significant difference in the proportion of male, female, and UIM residents who go into academia. Our findings demonstrate that the absence of equitable representation in academia is not due to disproportionate attrition from the academic track after residency, but rather a shortage in the number of female and minority residents who are matriculating into plastic surgery residency.

Topical Deferoxamine Patch is Superior to Direct Injection for the Treatment of Radiation-Induced Skin Fibrosis

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INTRODUCTION: Deferoxamine (DFO) improves cutaneous radiation-induced fibrosis (RIF). This study compared direct DFO