**Frequency and Risk Factors of Blood Transfusion in Abdominoplasty in Post-Bariatric Surgery Patients**

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**Introduction:** Despite attempts to minimize exposure to allogeneic blood, there is limited data in blood transfusion following abdominoplasty especially in post-bariatric surgery patients.

**Purpose:** To evaluate: 1) the frequency of blood transfusion in post-bariatric surgery patients who underwent abdominoplasty, 2) the effect blood transfusion in surgical outcomes and 3) predictive risk factors of blood transfusion in this patient population.

**Methods and Materials:** Using the Nationwide Inpatient Sample (NIS) database, we examined the clinical data of patients with prior history of bariatric surgery who underwent abdominoplasty from 2007 to 2011 in the United States. Multivariate regression analysis was performed to identify predictive risk factors of blood transfusion.

**Results:** A total of 20,130 post-bariatric patients underwent abdominoplasty during this period in the United States. The mean age was 50 years and 71% were Caucasian. Overall, 1871 patients (9.3%) received blood transfusion. Chronic anemia patients had the highest rate of blood transfusion (25.6%). Post-bariatric surgery patients had a significantly higher rate of blood transfusion compared to others undergoing abdominoplasty (9.3 % vs. 6.1%; $p<0.01$). Post-bariatric patients who received blood transfusion experienced a significantly higher complication rate (10.1 vs. 4.8% $p<0.01$), longer mean hospital stay (4.0 days vs. 2.4 days; $p<0.01$) and higher mean total hospital charges ($49,116 vs. $33,927; $p<0.001$). Multivariate regression analysis showed chronic anemia (adjusted odds ratio [AOR], 3.8), congestive heart failure (AOR, 2.4), concurrent breast reduction (AOR, 1.5), diabetes mellitus (AOR, 1.4), African American race (AOR, 1.4), Hispanic race (AOR, 1.4), and female gender (AOR, 1.2) were all independent risk factors for blood transfusion. This data set showed no association between age, Asian race, Native American race, hypertension, chronic lung disease, chronic kidney disease, liver disease, smoking, concurrent abdominal hernia repair, concurrent breast augmentation and teaching status of hospitals on blood transfusion.

**Conclusions:** The blood transfusion rate in post bariatric abdominoplasty patients is not insignificant (9.3%). It is associated with higher complication rates, longer hospital stays and higher total cost. We identified several risk factors for blood transfusion in these patients, with chronic anemia and congestive heart failure being the two major predictors of transfusion. Modifying risk factors such as anemia prior to abdominoplasty might significantly decrease the possibility of blood transfusion.