

Effect of Intraoperative Blood Pressure on Incidence of Hematoma in Breast Reduction Mammoplasty

Presenter: Amy Yao, MD

Co-Authors: Joseph Yi, BA, Plastic Surgery, Montefiore Medical Center, NY; Nicolas Greige, MD, Albert Einstein College of Medicine, Bronx, NY; Katherine Chemakin, B.S.; Katie E Weichman, MD, Plastic and Reconstructive Surgery, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY; Joseph A Ricci, MD, Division of Plastic Surgery, Montefiore Medical Center, NY

Affiliation: Division of Plastic Surgery, Montefiore Medical Center, Bronx, NY

BACKGROUND

Postoperative hematomas are among the most frequent complications following breast reduction mammoplasty. Intraoperative hypotension has been implicated in the development of postoperative hematomas following breast reduction. However, this relationship has not been rigorously studied. We sought to isolate blood pressure as an independent determinant of postoperative bleeding. In this study, we performed a retrospective, propensity-matched analysis of patients undergoing primary breast reduction to determine the relationship between intraoperative blood pressure and the development of a postoperative hematoma.

METHODS

A retrospective review of all patients that underwent breast reduction mammoplasty at a single institution from 2017 to 2019 (n=563) was conducted. Patients with known bleeding diatheses, coagulation disorders, or history of breast cancer were excluded. Charts were reviewed for patient demographics, perioperative characteristics, comorbidities, and postoperative complication. Patients who developed a postoperative hematoma were propensity matched to two controls based on BMI and age. The operation was divided into equal thirds, and the mean systolic blood pressure (SBP) and average mean arterial pressure (MAP), as well as the ranges of these measurements, were recorded for each third. Data were analyzed using conditional logistic regression.

RESULTS

A total of 32 patients that developed postoperative hematomas were propensity matched to 64 controls. There was no difference in baseline SBP (128 vs. 126 mmHg, p=0.61), diastolic blood pressures (82 vs. 82 mmHg, p=0.93), or prevalence of hypertension (21.9 vs. 18.8%, p=0.68) between groups. There was no significant difference in average SBP or MAP between groups. The average MAP during the first third of the case was found to be lower in patients who developed a hematoma, compared to the matched controls (69 vs. 72 mmHg), which approached significance at p=0.08.

CONCLUSION

There does not appear to be an association between intraoperative blood pressure and incidence of hematoma when comparing patients who developed hematomas after breast reduction mammoplasty to propensity matched controls.