

Variations in Complication Rates for Elective Non-Reconstructive Breast Surgery: An Analysis of NSQIP Data from 2006-2010

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Abstract

Background: As elective non-reconstructive breast surgery increases in popularity, there is greater demand for accurate multi-institutional data on post-operative outcomes. This study utilized a multi-institutional database to compare the 30-day morbidities and reoperation rates among the different types of elective non-reconstructive breast surgery.

Methods: Patients in the National Surgical Quality Improvement Program (NSQIP) database who underwent elective breast surgery between 2006 and 2010 were identified using *primary* CPT codes. Twenty defined morbidities were compared among mastopexy (CPT 19316), reduction mammoplasty (CPT 19318), and augmentation mammoplasty (CPT 19325) procedures using ANOVA and chi-squared tests for continuous variables and categorical variables, respectively. Logistic regression modeling was employed to identify preoperative risk factors for complications.

Results: Of the 4,272 patients identified, 654 underwent mastopexy, 2,779 underwent reduction mammoplasty, and 839 underwent augmentation mammoplasty. Complication rates were low in all cohorts, and patients undergoing augmentation mammoplasty had the lowest overall complication rate compared to mastopexy and reduction mammoplasty (1.43% vs. 2.75% vs. 4.64%). Patients undergoing reduction mammoplasty had a modestly elevated incidence of overall morbidity, superficial surgical site infections (SSI), and wound disruptions ($P < 0.05$). Moreover, thirty-day reoperation rates for mastopexy, reduction mammoplasty, and augmentation mammoplasty were low (2.60%, 1.94%, and 1.19%), as were the rates of life threatening complications (0.15%, 0.18%, and 0%). Only one death (0.02%) was observed for all 4,272 procedures.

Conclusions: Elective breast surgery is a safe procedure with an extremely low incidence of life threatening complications and mortality. Comprehensive data collated from the NSQIP initiative adds to the literature of single surgeon or center studies. As such, the findings of this multi-institutional study may help further guide patient education and expectations on potentially deleterious outcomes.

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