

Purpose

Obesity, determined by body mass index (BMI), is known to be associated with increased surgical complications. While symptoms of macromastia, such as back pain, are generally successfully treated by reduction mammoplasty, affected patients typically suffer from associated obesity which can lead to post-operative complications that compromise clinical outcome. This study was performed to determine if there exists a correlation between BMI and post-operative complications in bilateral reduction mammoplasty.

Methods

The authors performed a retrospective analysis of consecutive bilateral reduction mammoplasties performed at the Brigham and Women's Hospital by 8 surgeons between 1995 and 2007. Demographic information, medical co-morbidities, BMI, reduction specimen weight, operative time, type of reduction mammoplasty, and post-operative complications were collected for analysis. Univariate and multivariate analyses were utilized in order to assess the association between BMI and complication rates. Multivariate logistic regression analysis was employed in order to determine the threshold BMI value at which differential complication rates were maximal.

Results

A total of 675 bilateral reduction mammoplasties were analyzed. A total of 75 (11%) post-operative complications were noted including hematoma, infection, soft tissue necrosis, and reoperation. Mean BMI was 31.0 ± 6.2 . BMI was noted to demonstrate a statistically significant association with complication rate by both univariate ($p=0.036$) and multivariate ($p=0.037$) analyses. Trend analysis of BMI as a categorical variable relative to complication rate was also statistically significant ($p=0.001$). A cutpoint was suggested whereby patients with a BMI >35.6 experienced a significantly higher surgical complication rate than patients below this threshold (OR=2.002, $p=0.004$).

Conclusion

BMI is significantly associated with increased risk of post-operative complications following bilateral reduction mammoplasty. Furthermore, a specific BMI in excess of 35.6 is associated with a twofold higher risk of complications. Although reduction mammoplasty generally provides a successful treatment for symptoms of macromastia, patients with a BMI of 36 or above should be cautioned regarding a potential increased risk of surgical complications as part of their pre-operative evaluation.