Obese women experience fewer complications after oncoplastic breast reconstruction following segmental mastectomy versus immediate breast reconstruction following skin-sparing mastectomy

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BACKGROUND: Oncoplastic breast reconstruction (OBR) following segmental mastectomy is a new technique, and there are a paucity of data on complications of OBR in obese patients(1-2). We hypothesized that obese patients would experience fewer complications after OBR and segmental mastectomy than after immediate breast reconstruction (IBR) following skin-sparing mastectomy.

METHODS: We reviewed a prospectively maintained database of all consecutive immediate breast reconstructions in obese patients (body mass index [BMI] ≥ 30 kg/m^2) at a single center between 2005 and 2013. Obese patients who underwent OBR were compared to those who underwent IBR with either implants or autologous tissue. The primary outcome measures were rates of overall complications and major complications, defined as complications requiring operative intervention. Multivariate logistic regression analyzed the associations between patient and surgical characteristics and postoperative outcomes.

RESULTS: We analyzed data for 472 patients (159 OBR vs. 313 IBR). Mean BMI for the entire cohort was 35.5±5.2 kg/m^2, and mean follow-up was 11.0±9.8 months. The OBR group had shorter average follow-up (11 vs. 12 months, $p<0.001$) than the IBR group. OBR patients were older (55 vs. 53 years, $p=0.006$), more obese (BMI=37 vs. 34 kg/m^2, $p<0.001$), and had a higher rate of medical co-morbidities (38.4% vs. 18.8%, $p<0.01$) than the IBR patients. OBR patients were much more likely to require post-operative radiation (98.1% vs. 12.5%, $p<0.001$). Overall complications were not significantly different between the IBR (42.8%) and OBR group (37.1%, $p=0.276$). However, the OBR group experienced shorter hospital stays on average (1.3 vs. 3.8 days, $p<0.001$), a lower rate of major complications (2.9% vs. 23.8%, $p<0.001$), fewer complications delaying adjuvant therapy (0% vs. 14.0%, $p<0.001$), and fewer hematomas/seromas (2.5% vs. 10.9%, $p<0.001$) than the IBR group. The IBR group had fewer minor wound healing complications (4.5% vs. 13.8%, $p=0.001$). Regression analysis found ≥1 medical comorbidity (OR=1.65, $p=0.011$) or BMI>40 kg/m^2 (OR=1.2, $p=0.03$) to be independent predictors for postoperative complications and OBR to be an independent protector against major complications (OR=0.1, $p<0.001$) and complications that delayed adjuvant therapy (OR=0.08, $p<0.001$).

CONCLUSIONS: Obese patients undergoing OBR experienced fewer complications than obese IBR patients. OBR likely represents a safer option

than IBR following mastectomy for select obese patients for whom segmental mastectomy is an option.

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