

Risks of Autologous Abdominal Free Flap Breast Reconstruction in Patients With Elevated Body Mass Index

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Background: Obesity is widely recognized as a significant risk factor for postoperative complications of breast reconstruction. Despite extensive research, there remains a lack of consensus regarding the specific complications and outcomes experienced by patients with obesity who undergo deep inferior epigastric perforator (DIEP) flap reconstruction. To provide a clearer understanding of the challenges faced by patients with obesity, we present a single-center outcome analysis of individuals who underwent DIEP flap reconstruction.

Methods: A cohort of 194 patients who underwent at least 1 DIEP flap was retrospectively analyzed at the University of Nebraska Medical Center utilizing electronic medical records. Patients who underwent DIEP flap breast reconstruction were organized into 5 categories using World Health Organization weight status by body mass index (BMI) obtained from the day of surgery. Surgical complications within 120 days and postsurgical complication-related procedural interventions were also evaluated and compared. Comparisons of variables of interest between weight groups were assessed using Mantel-Haenszel chi-square tests or Spearman correlations.

Results: Increases in patient weight category were associated with increased length of operation ($P = 0.003$), increased rates of breast fat necrosis ($P = 0.04$), breast wound dehiscence ($P = 0.01$), abdominal wound dehiscence ($P = 0.02$), numbers of abdominal complications ($P = 0.001$), and rates of requiring an intervention ($P = 0.03$).

Conclusions: The findings imply that higher BMI values may lead to a higher likelihood of postoperative complications and the need for intervention. It is crucial for patients with obesity to be aware of the elevated risk associated with rising BMI values. (*Plast Reconstr Surg Glob Open* 2025; 13:e6457; doi: 10.1097/GOX.00000000000006457; Published online 16 January 2025.)

INTRODUCTION

The use of autologous breast reconstruction, particularly deep inferior epigastric perforator (DIEP) flaps, has been of interest in select high-risk populations, including patients with obesity.¹ The prevalence of obesity in the

United States is now greater than 40% of the total population,² which has also translated to an increased number of patients from these populations seeking autologous breast reconstruction. Previous studies have shown that obesity is a risk factor for postoperative complications in breast surgery.^{3,4} However, studies on DIEP flap breast reconstruction have demonstrated conflicting evidence of surgical outcomes and complications.^{1,5–13} DIEP flap breast reconstruction has been suggested as the preferred surgical method for obese postmastectomy patient.^{5,7,11,14} Discrepancies between studies include major parameters at both donor and recipient sites, including flap compromise or loss, infections, donor site morbidity, delayed wound healing, hernias or bulges, and reoperation rates. In addition, the clinical importance of the associated complications and outcomes when determining surgical options for patients with obesity is inconsistent in the literature.

Given these discrepancies, there is a need for further evaluation of the outcomes of autologous breast

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reconstruction in different patient populations. To aid in this effort, we conducted a single-center outcome analysis of patients who underwent abdominally based free flap breast reconstruction, particularly DIEP flap breast reconstruction. In addition, we aimed to further identify how complications and outcomes are related to patient characteristics and treatment details.

METHODS

A retrospective chart review of 194 patients (332 flaps) who had received autologous breast reconstruction following mastectomy between 2017 and 2022 was performed. Approval from the University of Nebraska Medical Center institutional review board was obtained (institutional review board protocol #0863-21-EP). Procedures were conducted by 3 primary surgeons: each case being done with a cosurgeon. Duration of time between DIEP flap breast reconstruction and mastectomy was noted as immediate (on the same day as the mastectomy), delayed-immediate (within 1–7 d from mastectomy), or delayed (greater than 3 mo) for each patient. Of note, no patients in this study were operated on within the 8-day to 3-month range. Patients who did not receive immediate or delayed-immediate reconstruction and subsequently had delayed reconstruction were patients who required adjuvant therapies (chemotherapy and/or radiation). Delayed-immediate reconstruction in this cohort does not refer to the use of tissue expanders, and patients in this cohort were routinely left flat until definitive reconstruction. Patients were categorized using the World Health Organization's body mass index (BMI) classification. Patients were underweight with a BMI less than 18.5 kg/m², normal weight with a BMI between 18.5 and 24.99 kg/m², overweight with a BMI between 25 and 29.99 kg/m², class I obese with a BMI between 30 and 34.99 kg/m², class II obese with a BMI between 35 and 39.99 kg/m², or class III obese with a BMI greater than 40 kg/m².

Patient demographic data that were recorded included age, BMI, race, existing comorbidities, tobacco use, and breast cancer characteristics. Details of breast cancer neoadjuvant or adjuvant treatment were also documented, along with details of each patient's DIEP flap surgery. DIEP flap surgery characteristics included length of operation, length of hospital stay, venous thromboembolism prophylactic medications, use of abdominal or breast mesh, and number of veins.

Complications related to both the donor and recipient sites were documented and included seroma, hematoma, infection, wound dehiscence, skin necrosis, abdominal hernia/bulge, deep vein thrombosis (DVT) or pulmonary embolism, flap compromise, fat necrosis, and skin necrosis. Flap compromise was defined as the need to return to the operating room for vascular compromise in the early postoperative period. Charts were reviewed for complications within 120 days of DIEP flap surgery, and the need for complication-related procedural intervention was recorded.

The primary outcomes of this study were to evaluate complication rates within the first 120 days in relation to different BMI categories among patients who underwent autologous DIEP flap breast reconstruction. Breast and abdominal complications that were evaluated included

Takeaways

Question: Is obesity associated with more complications in patients undergoing deep inferior epigastric perforator flap breast reconstruction?

Findings: A retrospective single-center outcome analysis of patients who underwent abdominally based free flap breast reconstruction found that increasing body mass index is associated with increased length of operation, breast fat necrosis and wound dehiscence, abdominal wound dehiscence, overall abdominal wound complications, and rates of subsequent intervention.

Meaning: Higher body mass index values may lead to a higher likelihood of postoperative complications and the need for intervention in deep inferior epigastric perforator flap breast reconstruction.

flap failure, seroma, hematoma, infection, wound dehiscence, skin necrosis, fat necrosis, abdominal hernia/bulge, and DVT or pulmonary embolism. Secondary outcomes evaluated included procedural intervention in the postoperative period for complication management.

Statistical Analysis

For breast-related complications, a specific complication was simply documented as present, whether the patient had that complication on one or both sides, but for counting the number of breast-related complications, all breast complications were divided by the number of breasts operated on so that bilateral patients would not have an inflated number of complications. All analyses were performed at the patient level. Descriptive statistics for continuous data are given as medians and interquartile ranges. Associations between BMI category and categorical variables of interest were assessed using the Mantel–Haenszel chi-square test for linear trend, or the exact version of that test when expected cell sizes were low. Associations between BMI categories and continuous variables were assessed using Spearman correlations. All analyses were performed using SAS software version 9.4 (SAS Institute, Inc., Cary, NC).

RESULTS

A total of 194 patients were included in the study and grouped based on BMI as defined earlier, combining the underweight and normal weight patients due to the small sample size of underweight patients ($n = 1$). The median age (in years) for each BMI category was 55.5 kg/m² for those under/normal weight, 50.0 kg/m² for those overweight, 46.0 kg/m² for those with class I obesity, 49.0 kg/m² for those with class II obesity, and 51.0 kg/m² for those with class III obesity (Table 1). Patients with higher BMI were more likely to have diabetes mellitus ($P = 0.04$). Most patients had a diagnosis of breast cancer before mastectomy and reconstruction (Table 2). Breast cancer characteristics and neoadjuvant and adjuvant therapies are also shown in Table 2.

The procedural characteristics evaluated are included in Table 3. Most patients received the DIEP flap operation in the delayed time frame, greater than 3 months from

Table 1. Descriptive Statistics by Weight Category

Variable	Under/Normal Weight	Overweight	Class I Obesity	Class II Obesity	Class III Obesity	P
n	22	60	65	33	14	
Age, y						0.13*
Median	55.5	50.0	46.0	49.0	51.0	
IQR	48.0, 60.0	40.0, 56.0	39.0, 54.0	43.0, 55.0	40.0, 57.0	
Race						0.83
White	22 (100%)	53 (88.3%)	55 (84.6%)	31 (93.9%)	13 (92.9%)	
Other	0 (0%)	7 (11.7%)	10 (15.4%)	2 (6.1%)	1 (7.1%)	
Tobacco use						0.25
Never	15 (68.2%)	42 (70.0%)	39 (60.0%)	18 (54.5%)	7 (50.0%)	
Former	7 (31.8%)	12 (20.0%)	21 (32.3%)	14 (42.4%)	7 (50.0%)	
Current	0 (0%)	6 (10.0%)	5 (7.7%)	1 (3.0%)	0 (0%)	
Hypertension	3 (13.6%)	16 (26.7%)	21 (32.3%)	8 (24.2%)	5 (35.7%)	0.25†
Diabetes mellitus	0 (0%)	1 (1.7%)	3 (4.6%)	4 (12.1%)	1 (7.1%)	0.04

P values from Mantel-Haenszel chi-square exact tests unless otherwise indicated.

*Spearman correlation.

†Mantel-Haenszel chi-square test.

IQR, interquartile range.

Table 2. Breast Cancer Characteristics and Treatment by Weight Category

Variable	Under/Normal Weight	Overweight	Class I Obesity	Class II Obesity	Class III Obesity	P
n	22	60	65	33	14	
Breast cancer	18 (81.8%)	54 (90.0%)	51 (78.5%)	26 (81.3%)	12 (85.7%)	0.56
Gene mutation	5 (22.7%)	10 (16.7%)	13 (20.0%)	10 (30.3%)	2 (14.3%)	0.64
Chemotherapy						
Neoadjuvant	7 (38.9%)	30 (55.6%)	32 (64.0%)	15 (55.6%)	5 (41.7%)	0.71
Adjuvant	2 (11.1%)	6 (11.1%)	6 (12.0%)	5 (18.5%)	2 (16.7%)	0.39*
Radiation						
Neoadjuvant	10 (55.6%)	23 (41.8%)	20 (40.0%)	9 (33.3%)	6 (50.0%)	0.45
Adjuvant	1 (5.6%)	8 (14.5%)	3 (6.0%)	5 (18.5%)	1 (8.3%)	0.82*
Hormonal therapy	11 (52.4%)	38 (64.4%)	30 (46.2%)	20 (62.5%)†	8 (57.1%)	0.89

*Mantel-Haenszel chi-square exact test.

†One patient unknown. P values from the Mantel-Haenszel chi-square tests unless otherwise indicated.

mastectomy. Nearly all patients received an abdominal mesh, and very few received a breast mesh. The length of the operation tended to be longer for patients with higher BMI ($P = 0.003$), with a difference between the median lengths of operation in under/healthy weight and class III obesity of 28 minutes. All patients received DVT prophylaxis before surgery; 193 patients received Lovenox, and 1 patient received heparin.

Complications were compared across the different BMI categories. Patients with higher BMI had a higher number of abdominal complications ($P = 0.001$) and total complications (breast and abdominal) ($P < 0.001$). The median number of total complications per patient was 0.0 for under/normal weight, 1.0 for overweight, 1.0 for class I obesity, 1.5 for class II obesity, and 1.8 for class III obesity (Table 4). Evaluating individual breast complications showed that higher BMI was correlated with increased rates of breast fat necrosis ($P = 0.04$) and breast wound dehiscence ($P = 0.01$). Rates of abdominal wound dehiscence also increased with increasing BMI ($P = 0.02$). Intervention for these complications was defined as procedural or surgical intervention and was required for 13.6% of under/normal weight patients, 43.3% of overweight patients, 29.2% of patients with class I obesity, 42.4% of patients with class II obesity, and 64.3%

of patients with class III obesity. Need for intervention showed a significantly positive correlation with increasing BMI ($P = 0.03$). There was no statistical significance regarding flap compromise and BMI (0.43); however, it is noted that flap compromise only occurred in patients with class I and class II obesity.

Because diabetes status was significantly associated with BMI and may potentially confound associations with outcomes, the association between BMI and number of total complications was assessed separately for patients with and without diabetes. This association remained significant in patients without diabetes ($P < 0.001$) but was not significant in the small number of patients ($n = 9$) who had diabetes ($P = 0.83$).

Subgroup analysis looking at BMI classes I, II, and III (Table 5) demonstrated no significant correlation in flap compromise ($P = 0.72$) or any breast complication. Increasing obese BMI category was significantly correlated with abdominal hematoma ($P = 0.01$), overall number of complications per abdomen ($P = 0.008$), and overall number of breast and abdominal complications ($P = 0.002$). BMI was also significantly correlated with requirement of postoperative intervention ($P = 0.01$) and total number of interventions per patient ($P = 0.04$) within this obese subgroup.

Table 3. Operative Characteristics by Weight Category

Variable	Under/Normal Weight	Overweight	Class I Obesity	Class II Obesity	Class III Obesity	P
n	22	60	65	33	14	
DIEP flap timing						0.81*
Immediate	2 (9.1%)	5 (8.3%)	7 (10.8%)	4 (12.1%)	1 (7.1%)	
Delayed- Immediate	8 (36.4%)	14 (23.3%)	19 (29.2%)	10 (30.3%)	4 (28.6%)	
Delayed	12 (54.5%)	41 (68.3%)	39 (60.0%)	19 (57.6%)	9 (64.3%)	
Mesh						
Breast	2 (9.1%)	3 (5.0%)	7 (10.8%)	3 (9.1%)	1 (7.1%)	0.72*
Abdominal	22 (100%)	57 (95.0%)	65 (100%)	33 (100%)	14 (100%)	0.29*
Bilateral	15 (68.2%)	38 (63.3%)	53 (81.5%)	27 (81.8%)	10 (71.4%)	0.11
No. veins						
Right breast						0.24
0–1	11 (52.4%)	23 (46.9%)	23 (40.4%)	11 (39.3%)	4 (36.4%)	
2–3	10 (47.6%)	26 (53.1%)	34 (59.6%)	17 (60.7%)	7 (63.6%)	
Unknown	1	11	8	5	3	
Left breast						0.50
0–1	9 (56.3%)	22 (44.9%)	26 (42.6%)	15 (46.9%)	5 (38.5%)	
2–3	7 (43.8%)	27 (55.1%)	35 (57.4%)	17 (53.1%)	8 (61.5%)	
Unknown	6	11	4	1	1	
Medications						
ASA	7 (31.8%)	17 (28.3%)	26 (40.0%)	12 (36.4%)	3 (21.4%)	0.84
Lovenox	22 (100%)	60 (100%)	64 (98.5%)	33 (100%)	14 (100%)	1.00*
Umbilicus sacrifice	11 (50.0%)	20 (33.3%)	18 (27.7%)	9 (27.3%)	9 (64.3%)	0.98
Length of operation (min)						0.003†
Median	439.0	440.0	483.0	463.0	467.0	
IQR	382.0, 488.0	364.5, 489.0	431.0, 539.0	433.0, 531.0	420.0, 528.0	
Length of stay (d)						0.86†
Median	3.5	4.0	4.0	4.0	3.5	
IQR	3.0, 4.0	3.0, 5.0	3.0, 5.0	3.0, 5.0	3.0, 4.0	
Prevena used	20 (90.9%)	48 (80.0%)	45 (69.2%)	24 (72.7%)	11 (78.6%)	0.15

P-values from the Mantel–Haenszel chi-square tests unless otherwise indicated.

*Mantel–Haenszel chi-square exact test.

†Spearman correlation.

ASA, aspirin; IQR, interquartile range.

DISCUSSION

Our study provides important evidence that increased BMI may be a significant risk factor for postoperative complications following DIEP flap breast reconstruction. We demonstrated that increasing BMI is positively correlated with longer operation times, abdominal and overall complications, breast fat necrosis, and both breast and abdominal wound dehiscence. In addition, the need for intervention for these complications was also significantly correlated with a higher BMI. Other evaluated factors, including flap compromise, seroma, hematoma, or infection were not significantly associated with BMI.

Subgroup analysis isolating obese patient cohorts revealed elevated BMI category to be significantly correlated with abdominal hematoma, overall abdominal complications, and overall breast and abdominal complications. Similarly, it was seen to be significantly correlated with postoperative intervention and number of interventions needed per patient.

The data obtained in this study further contribute to the results from prior studies showing a correlation between obesity and complications in breast reconstruction surgery.^{5,8–10} Although the concept of a higher BMI correlating with increased complication rates is far from novel, the literature to date regarding abdominally based

free flap breast reconstruction is not uniform. Jandali et al⁸ found significance, particularly in patients with BMI greater than 40 kg/m² with an increased risk of flap loss, postoperative complications, and delayed wound healing, with the latter 2 showing similar results to our study. However, we did not observe any associations with flap compromise across BMI classes, as only 3 patients in our study experienced flap compromise. Additional studies have also found that flap compromise was not associated with BMI, but other complications, such as postoperative infection, were associated with BMI which was not seen in this study.^{13,15} In our study, flap compromise resulted in 1 patient having partial flap necrosis, 1 with subsequent fat necrosis, and 1 with no sequelae following operative intervention.

We did not find significant associations between BMI and the majority of predisposing factors evaluated, including tobacco use and hypertension, unlike the study by Timmerman et al,¹⁶ which suggested that smoking was a risk factor for wound dehiscence but found no significant association between dehiscence and BMI.¹⁶ Two recent studies by Mather et al^{15,17} suggested that patients with class III obesity have high morbidity when undergoing autologous free flap breast reconstruction but found that complications did not differ between

Table 4. Complications by Weight Category

Variable	Under/Normal Weight	Overweight	Class I Obesity	Class II Obesity	Class III Obesity	P
n	22	60	65	33	14	
Flap compromise	0 (0%)	0 (0%)	2 (3.1%)	1 (3.0%)	0 (0%)	0.43
Breast						
Seroma	0 (0%)	1 (1.7%)	1 (1.6%)*	1 (3.0%)	0 (0%)	0.79
Hematoma	3 (13.6%)	5 (8.3%)	6 (9.2%)	1 (3.0%)	1 (7.1%)	0.34
Infection	0 (0%)	6 (10.0%)	3 (4.7%)	3 (9.1%)	2 (14.3%)	0.31
Fat necrosis	2 (9.1%)	10 (16.7%)	12 (18.5%)	8 (24.2%)	5 (35.7%)	0.04†
Wound dehiscence	2 (9.1%)	12 (20.0%)	16 (24.6%)	11 (33.3%)	6 (42.9%)	0.01†
Skin necrosis	1 (4.5%)	8 (13.3%)	5 (7.7%)	2 (6.1%)	3 (21.4%)	0.66
Overall no. per breast						0.08‡
Median	0.0	0.0	0.0	0.0	0.8	
IQR	0.0, 0.5	0.0, 1.0	0.0, 1.0	0.0, 1.0	0.0, 2.0	
Abdomen						
Seroma	0 (0%)	2 (3.3%)	2 (3.1%)	2 (6.1%)	2 (14.3%)	0.07
Hematoma	0 (0%)	4 (6.7%)	0 (0%)	0 (0%)	2 (14.3%)	0.70
Infection	2 (9.1%)	5 (8.3%)	9 (13.8%)	5 (15.2%)	3 (21.4%)	0.16
Fat necrosis	2 (9.1%)	6 (10.0%)	5 (7.7%)	7 (21.2%)	2 (14.3%)	0.25
Wound dehiscence	4 (18.2%)	15 (25.4%)*	18 (27.7%)	16 (48.5%)	5 (35.7%)	0.02†
Skin necrosis	0 (0%)	2 (3.3%)	4 (6.2%)	4 (12.1%)	1 (7.1%)	0.09
Hernia/bulge	0 (0%)	0 (0%)	1 (1.5%)	1 (3.0%)	0 (0%)	0.52
Overall no. per abdomen						0.001‡
Median	0.0	0.0	0.0	1.0	1.0	
IQR	0.0, 0.0	0.0, 1.0	0.0, 1.0	0.0, 2.0	0.0, 2.0	
Overall no. breast and abdominal complications						<0.001‡
Median	0.0	1.0	1.0	1.5	1.8	
IQR	0.0, 1.0	0.0, 2.0	0.0, 1.5	1.0, 2.0	1.0, 4.0	
DVT/PE	0 (0%)	0 (0%)	1 (1.5%)	0 (0%)	0 (0%)	1.00
Intervention required (120 d)	3 (13.6%)	26 (43.3%)	19 (29.2%)	14 (42.4%)	9 (64.3%)	0.03†
Total no. interventions	0.0	0.0	0.0	0.0	1.0	0.08‡
Median	0.0, 0.0	0.0, 1.0	0.0, 1.0	0.0, 1.0	0.0, 2.0	
IQR						

*One patient unknown. P values from the Mantel-Haenszel chi-square exact tests unless otherwise indicated.

†Mantel-Haenszel chi-square test.

‡Spearman correlation.

PE, pulmonary embolism; IQR, interquartile range.

the three classes of obesity. Other studies have also suggested associations between obesity and breast reconstruction complications in the sense that obesity may modify other risk factors but suggest that BMI itself is not a risk factor.¹²

Muscle-sparing flap-based procedures, particularly the DIEP flap, have been suggested as the preferred breast reconstruction method for patients with obesity, with evidence of better outcomes than alternative breast reconstruction techniques.^{18–21} However, we found that although DIEP flap reconstruction is an effective procedure, there are still associated risks that are particularly correlated with obesity and increasing BMI. Patients with obesity should be informed of the increased risk of these complications in accordance with increasing BMI. A recent study by Patterson et al¹⁰ found class III obesity to be an independent risk factor for both abdominal site and flap complications and concluded that it may be beneficial to postpone reconstructive surgery until BMI is lower. Further research may be needed to provide a recommendation regarding the ideal time for reconstructive surgery in patients with obesity.

Limitations

Despite the large patient cohort over a period of several years, there are limitations to this study that must be acknowledged. The retrospective nature of this study has limitations compared with prospective studies, including reporting or misclassification bias, undocumented confounding variables, and differences in surgical techniques. The current study was conducted at a single center, and it is important to consider that wider patient populations may need to be considered to assess differences in geographical location and institutional practices. Given the retrospective nature of the study, it was also noted that the sample sizes of patients who qualified as classes II and III obesity were smaller than those of the other patient classifications. We acknowledge a limited racial diversity profile, which is also due to the retrospective, single-center nature of the study and is important to consider when assessing the results.

CONCLUSIONS

We found that a higher BMI was associated with an increase in abdominal complications, overall

Table 5. Complications by Weight Category, Obese Groups Only

Variable	Class I Obesity	Class II Obesity	Class III Obesity	P
n	65	33	14	
Flap compromise	2 (3.1%)	1 (3.0%)	0 (0%)	0.72
Breast				
Seroma	1 (1.6%)*	1 (3.0%)	0 (0%)	1.00
Hematoma	6 (9.2%)	1 (3.0%)	1 (7.1%)	0.61
Infection	3 (4.7%)	3 (9.1%)	2 (14.3%)	0.20
Fat necrosis	12 (18.5%)	8 (24.2%)	5 (35.7%)	0.16†
Wound dehiscence	16 (24.6%)	11 (33.3%)	6 (42.9%)	0.14†
Skin necrosis	5 (7.7%)	2 (6.1%)	3 (21.4%)	0.25
Overall no. per breast				0.15‡
Median	0.0	0.0	0.8	
IQR	0.0, 1.0	0.0, 1.0	0.0, 2.0	
Abdomen				
Seroma	2 (3.1%)	2 (6.1%)	2 (14.3%)	0.13
Hematoma	0 (0%)	0 (0%)	2 (14.3%)	0.01
Infection	9 (13.8%)	5 (15.2%)	3 (21.4%)	0.52†
Fat necrosis	5 (7.7%)	7 (21.2%)	2 (14.3%)	0.23
Wound dehiscence	18 (27.7%)	16 (48.5%)	5 (35.7%)	0.18†
Skin necrosis	4 (6.2%)	4 (12.1%)	1 (7.1%)	0.63
Hernia/bulge	1 (1.5%)	1 (3.0%)	0 (0%)	1.00
Overall no. per abdomen				0.008‡
Median	0.0	1.0	1.0	
IQR	0.0, 1.0	0.0, 2.0	0.0, 2.0	
Overall no. breast and abdominal complications				0.002‡
Median	1.0	1.5	1.8	
IQR	0.0, 1.5	1.0, 2.0	1.0, 4.0	
DVT/PE	1 (1.5%)	0 (0%)	0 (0%)	0.71
Intervention required (120 d)	19 (29.2%)	14 (42.4%)	9 (64.3%)	0.01†
Total no. interventions				0.04‡
Median	0.0	0.0	1.0	
IQR	0.0, 1.0	0.0, 1.0	0.0, 2.0	

*One patient unknown. P values from the Mantel–Haenszel chi-square exact tests unless otherwise indicated.

†Mantel–Haenszel chi-square test.

‡Spearman correlation.

PE, pulmonary embolism; IQR, interquartile range.

complication rate, breast fat necrosis, and wound dehiscence. In addition, the need for intervention for these complications was also significantly correlated with a higher BMI. Other evaluated factors, including flap compromise, did not correlate with BMI. The present study examined complications and factors across the spectrum of BMI classes in patients who underwent DIEP flap breast reconstruction. We conclude that the DIEP flap is a suitable option for breast reconstruction in patients with obesity. However, it is important to discuss the increased risk of complications with patients before surgery.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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