
Breast Enlargement Induced by Liposuction

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BACKGROUND. Liposuction has become a major therapeutic tool for body sculpting by dermatologic surgeons. To date, breast augmentation has been the only effective tool for breast enlargement.

OBJECTIVE. To review retrospectively records of patients who have undergone traditional tumescent liposuction to determine whether breast size is commonly affected by liposuction of other body areas.

RESULTS. Breast enlargement occurred in 43% of patients who underwent one or more tumescent liposuction surgeries. Thirty

percent of all patients experienced an increase of one cup size or greater. Two variables were found to be predictive of breast enlargement after liposuction: those patients who had more total supernatant fat removed and/or those who weighed more initially.

CONCLUSION. Cosmetically significant breast enlargement is a common occurrence after tumescent liposuction surgery.

E. FINZI, MD, PHD HAS INDICATED NO SIGNIFICANT INTEREST WITH COMMERCIAL SUPPORTERS.

FOR CENTURIES, women have attempted to create the appearance of larger breasts through clothing,¹ thus conforming to long-standing cultural pressures.² Larger breasts have been in vogue since antiquity except for brief periods.³ Initial invasive attempts at breast enlargement began in the 18th century and were fraught with complications.⁴ Since the development of the silicone gel-filled implant in 1963⁵ and the saline implant in 1969,⁶ breast augmentation has become one of the most popular cosmetic procedures. At least one- or two-million women in the United States alone have undergone breast implant augmentation.⁷ In spite of its popularity, breast augmentation surgery continues to have frequent complications such as capsular contracture, implant rupture, changes in breast sensation, calcifications, and scarring. A safe alternative that would allow breast enhancement while avoiding these complications would be desirable.

Tumescent liposuction by local anesthesia was first described in 1987 by Klein⁸ and has evolved into a powerful body sculpting tool.⁹⁻¹¹ The procedure has a superior safety record¹² and has become one of the most popular cosmetic surgical procedures. Several years ago, we first noticed that some patients experienced breast enhancement after liposuction of another body site. To help to understand these observations better, we conducted a retrospective analysis of patients who had liposuction surgery to

determine whether and how this affected their breast size.

Methods

Sixty charts of patients who had had traditional (nonpowered) tumescent liposuction of one or more body areas during the previous 3 years and who were at least 6 months postoperative from their last surgery were randomly selected from an office registry of liposuction patients. For a control group, 35 charts of patients who had undergone a cosmetic procedure, but not liposuction, were randomly selected. Patients were then interviewed either by phone or in person. Patients with a history of breast feeding, pregnancy, breast augmentation or reduction, or abdominoplasty were excluded from the study. The following data were obtained on all patients: age, weight at initial surgery (or 2 years ago in the control group), current weight, bra size before surgery (or 2 years ago for the control group) and currently, sites of liposuction, and total supernatant fat removed from all tumescent liposuction procedures. A total of 44 female liposuction patients and 27 control subjects met the entry criteria.

Results

Liposuction Commonly Causes Breast Enlargement

The demographic characteristics of all patients at baseline are shown in Table 1. Of patients who had undergone tumescent liposuction, 19 of 44 experienced breast enhancement after surgery. In comparison, only 1 of 27 control patients who had not

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Table 1. Demographic Characteristics of Patients at Baseline

Characteristic	Control	Liposuction
Age in years, mean and range	44 (25–62)	42 (29–59)
Weight in kg, mean and range	65 (46–108)	69 (50–120)

undergone surgery noted a change in breast size ($P < 0.005$, chi-square analysis). Overall, 43% of patients who had liposuction noted significant breast enlargement. Of these 19 patients with breast enlargement, 14 of 19 (74%) had had liposuction of the abdomen and/or flanks. As seen in Figure 1, 30% of all liposuction patients changed at least one cup in bra size. Table 2 shows the change in bra size in 13 patients. The majority of these (11 of 13 [85%]) had had liposuction of the abdomen or abdomen and flanks. Two patients who had had liposuction of the lower extremities alone also experienced an increase in breast size (patients 7 and 12) (Table 2). Of interest, patients with or without breast enlargement showed a similar loss in weight after liposuction (Table 3).

A comparative analysis of patients with or without breast enhancement revealed that the total amount of supernatant fat removed (in one or more sessions) was positively correlated with an increase in breast size ($P < 0.05$). In addition, the preoperative weight was significantly higher in those experiencing breast enhancement ($P < 0.05$).

Conclusions

Cosmetically, significant breast enhancement was seen in 43% of our patients undergoing tumescent liposuc-

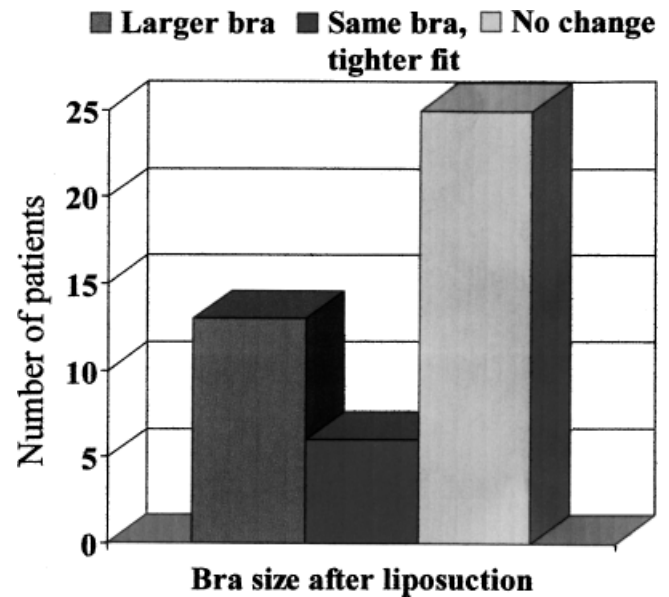


Figure 1. Numbers of patients undergoing a change in bra size after liposuction.

tion. Those patients who were heavier and had more total fat removed were more likely to experience breast enhancement. However, breast enlargement was not due to weight gain, as the majority of liposuction patients either maintained the same weight or lost weight (Table 3). Many of our patients who experienced breast enhancement had multiple body areas treated in several different surgical sessions. We believe that the tumescent technique combined with the highly efficient microcannula removal of fat may have contributed to the high frequency of breast enhancement that we observed.

The mechanism by which tumescent liposuction induces breast enlargement is not known. We did not

Table 2. Comparative Breast Size of Patients Before and After Liposuction

Patient	Preoperative Weight (kg)	Preoperative Bra	Postoperative Weight (kg)	Postoperative Bra	Liposuction Site(s)
1	65.0	36C	63.6	38C	Abdomen (abd), lower extremities (le)
2	95.5	38B	90.0	38C	abd/flanks (flks)/le
3	65.9	34B	65.9	36D	abd
4	70.5	38C	65.9	38D	abd/flks
5	63.6	36D	63.6	36 DD	abd/flks
6	73.6	34C	67.3	34D	abd/flks
7	95.5	38B	95.5	42C	le
8	95.0	36C	95.0	36D	abd/le
9	74.5	34C	72.7	36D	abd/flks
10	77.3	34B	83.2	36C	abd
11	62.7	34B	64.5	36C	abd/flks
12	77.3	36B	70.0	36C	le
13	61.8	36B	63.6	38C	abd

Table 3. Comparative Characteristics of Patients With or Without Breast Enlargement

Characteristic	No Change	Increased Breast Size
Age-yr Mean, range	40 (28–61)	42 (29–59)
Postop time since last Surgery-Months, Mean, range	19 (8–36)	20 (8–36)
Preop Wt Kg Mean, range, <i>P</i> value (<i>t</i> test) < .05	58 (54–79)	78 (50–109)
Postop Wt Kg, Mean, range, <i>P</i> value (<i>t</i> test) < .05	56 (54–72)	76 (50–99)
Supernatant Fat Total removed-cc <i>P</i> value (<i>t</i> test) < .05	1340(500–4300)	3448(800–11,100)

observe any significant association between menopausal status and breast enlargement. Whether hormonal influences play a role remains to be elucidated.

Greater numbers of patients with increased breast size had had their abdomen and/or flanks treated (74% vs. 64% of patients with no change), but this was not statistically significant. Whether the body type (i.e., android) is an important factor needs to be studied.

We have occasionally observed that patients undergoing tumescent liposuction have added fat to areas other than the breast, that is, liposuction of the abdomen/flanks followed by an increase in arm adipose tissue. However, in the vast majority of these patients, there was also an increase in weight. In contrast, the majority of our patients with breast

enlargement did not gain weight (Table 2). Prospective studies should be helpful in defining the mechanism of breast enlargement.

Patients were uniformly pleased with these unexpected results, and many were asked by friends whether that they had undergone breast implant surgery. Given the cosmetic importance of the breast, it will be of interest to elucidate further parameters that allow more precise control of breast enhancement by tumescent liposuction.

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