

TIPS AND TECHNIQUES

Staged Liposuction With Subsequent Abdominoplasty for the Large Female Patient

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Liposuction and abdominoplasty are the 2 most common surgical techniques used to enhance the abdominal/flank area today. Because most, if not all, of the patients at our facility want the flattest tummy and smallest waist possible, we treat larger patients who desire abdominal enhancement, if they are appropriate candidates, with staged liposuction followed by subsequent full abdominoplasty at 4 to 6 months. Liposuction offers the advantages of midepigastic and flank improvement while preserving adequate vascularity in preparation for full abdominoplasty. Staging the 2 procedures minimizes the risks associated with anesthesia in a prolonged surgery. This case series is presented as an alternative technique of staging liposuction with subsequent abdominoplasty for obese patients who are seeking abdominal enhancement and for cosmetic surgeons who still prefer to perform a traditional abdominoplasty, maximizing the postoperative cosmetic results while minimizing all possible associated operative risks. To our knowledge, there is no described technique in the literature on staging liposuction with abdominoplasty in larger female patients.

Liposuction and abdominoplasty are the 2 most common surgical techniques used for contouring the abdominal/flank area today. The more common of the excisional procedures performed has been the full or Matarasso type IV abdominoplasty.¹ During the past 2 decades, the introduction of liposuction has changed the concept of surgical treatment of body contouring, and various techniques of combined liposuction, with or without abdominoplasty, have been

proposed. Patients who are overweight and have a body mass index (BMI) >30–35 may be candidates for body contouring in the abdominal area and would benefit from these combined procedures, that is, lipoabdominoplasty.¹

Given that most, if not all, of the patients at our facility want the flattest tummy and smallest waist possible, we treat larger patients who desire abdominal reduction, if they are appropriate candidates, with staged liposuction followed by subsequent full abdominoplasty at 4 to 6 months. The results are much improved over the results of nonstaged procedures. Liposuction offers the advantages of midepigastic and flank improvement while preserving adequate vascularity in preparation for full abdominoplasty. Staging the 2 procedures minimizes the risks associated with anesthesia in a prolonged surgery. To our knowledge, there is no described technique in the literature on staging liposuction with abdominoplasty in larger female patients.

Methods

A complete medical and surgical evaluation is conducted on every patient seeking abdominal contouring. Routine laboratory tests are ordered and evaluated, and the patient's BMI is calculated. After appropriate medical clearance for surgery, the patient consents to the staging of the procedures, and the complications pertaining to each surgery are thoroughly explained. The patient then schedules stage 1, liposuction. On the day of the surgery, the patient undergoes final evaluation, marking, and photographing of the areas to be treated. Under general anesthesia, small incisions are made with a biopsy punch on the marked areas in order to infiltrate the tumescent anesthesia using an infiltration cannula connected to an infiltration machine. Using aspiration cannulas connected to a suction

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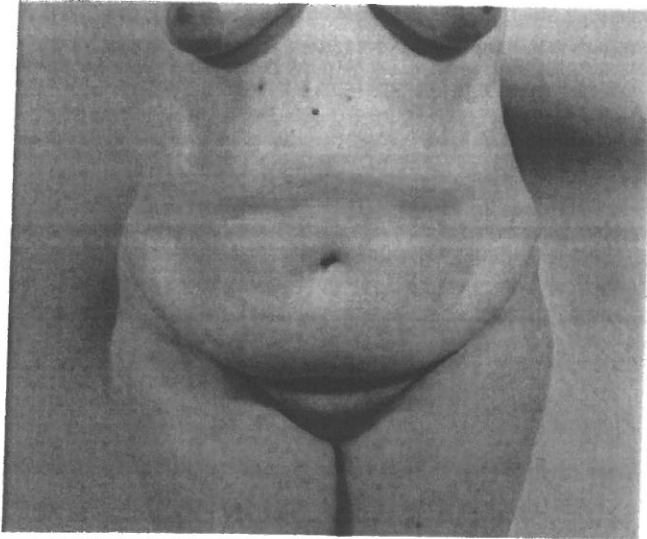


Figure 1. Patient no. 1 before liposuction.

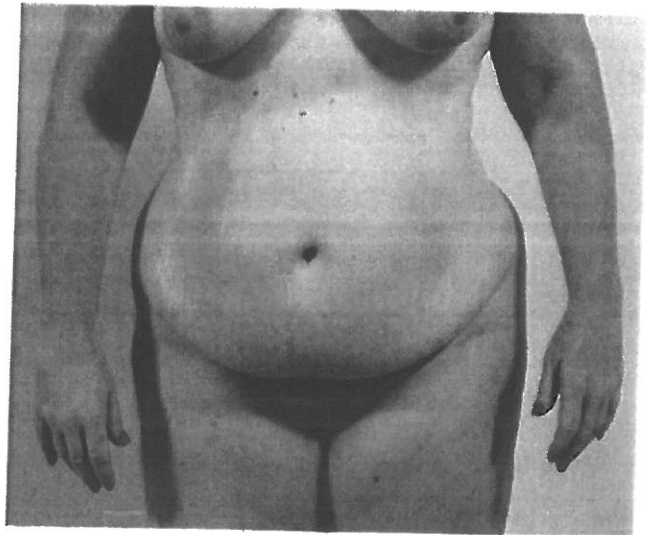


Figure 2. Patient no. 1 after liposuction and before abdominoplasty.

machine, fat is aspirated from the upper abdomen, flanks, back, and mons, sparing the lower abdominal panniculus. Both the infiltration of the tumescent anesthesia and the suction of the fat are performed using a fanning technique, creating tunnels that, when collapsed, will create the new shape of the treated areas. Skin incisions are left opened for adequate drainage, and the patient is placed in a garment that covers all treated areas to help with appropriate retraction of the skin. The patient is then treated with postoperative ultrasound treatments starting at about 1–2 weeks after surgery, and the second stage, the type IV abdominoplasty, in which the panniculus left behind will be removed, is scheduled for 4–6 months after stage 1 is completed. The patient is periodically evaluated for appropriate recovery.

On the day of the abdominoplasty, the patient is again evaluated, marked, and photographed before the surgery. Under general anesthesia, a type IV abdominoplasty is performed. A low transverse incision is made, the anterior abdominal wall is separated from the symphysis pubis to the xyphoid, transposition of the umbilicus and plication of the rectus abdominal muscles are performed, the skin is pulled down toward the pubis, and excess skin containing the untreated panniculus from stage 1 is removed. The incision is then sutured together. Two drains are left in place, which will be removed accordingly. The patient is periodically evaluated for appropriate recovery. The final results of this staged procedure should be evident 3–6 months after completion of the second stage.

Case Series

Case No. 1

Patient 1 was a 44-year-old woman with a BMI of 33.1 who presented to the clinic for abdominal contouring (Figure 1). The patient had no medical history and a surgical history of 4 cesarean sections and a tubal ligation. The patient had an initial waist measurement of 47 inches. On December 2007, the patient underwent liposuction of the upper abdomen, back, flanks, mons, and lateral legs, sparing the lower abdominal panniculus; 5425 mL of fat was removed (for a total 6250 mL). The operation was performed under general and tumescent anesthesia and lasted 2 hours and 5 minutes with no postoperative complications (Figure 2). No postoperative ultrasound treatments were performed. On June 2008, the patient underwent abdominoplasty with a duration of 2 hours and 24 minutes. Excision of the skin flaps measured approximately 12 cm each. The right drain was removed on postoperative day 6, and the left drain was removed on postoperative day 9. The patient developed a 1.5-cm dehiscence left of midline with complete spontaneous resolution. The patient had good cosmetic surgery results and had a postoperative waist measurement of 33 inches (Figure 3).

Case No. 2

Patient 2 was a 46-year-old woman with a BMI of 33.3 who presented to the clinic requesting abdominal contouring (Figure 4). The patient had a medical history of hypothyroidism, fibromyalgia, migraine

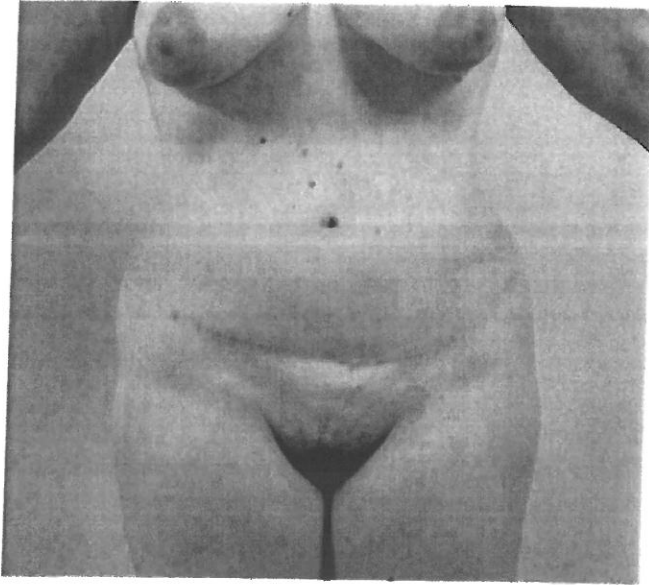


Figure 3. Patient no. 1 final results after abdominoplasty.

headaches, depression, and a herniated lumbar disk, and had a surgical history of 2 previous cesarean sections, a hysterectomy, an appendectomy, and a cholecystectomy. The patient had an initial waist measurement of 44 inches. On October 2008, the patient underwent liposuction of the upper abdomen, flanks, back, and mons, sparing the lower abdominal panniculus; 4750 mL of fat (for a total of 6200 mL) was removed. The operation was performed under general and tumescent anesthesia with a duration of 1 hr and 19 minutes and no postoperative complications (Figure 5). The patient had one postoperative ultrasound treatment. On January

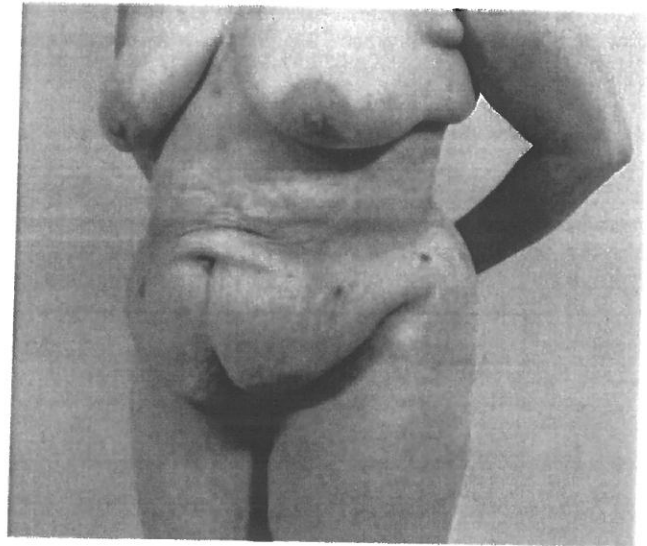


Figure 5. Patient no. 2 after liposuction and before abdominoplasty.

2009, 3 months after liposuction and with a waist measurement of 33 inches, the patient underwent abdominoplasty and bilateral axillary liposuction with a duration of 2 hours and 50 minutes. Excision of the skin flaps measured approximately 12 cm each. The left drain was removed on postoperative day 4 and the right drain on day 8; there were no postoperative complications (Figure 6).

Case No. 3

Patient 3 was a 64-year-old woman with a BMI of 33.67 who presented to the clinic for abdominal

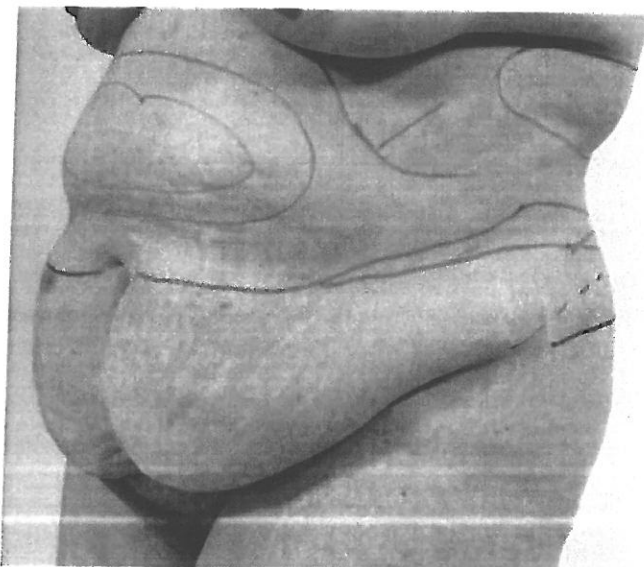


Figure 4. Patient no. 2 before liposuction.

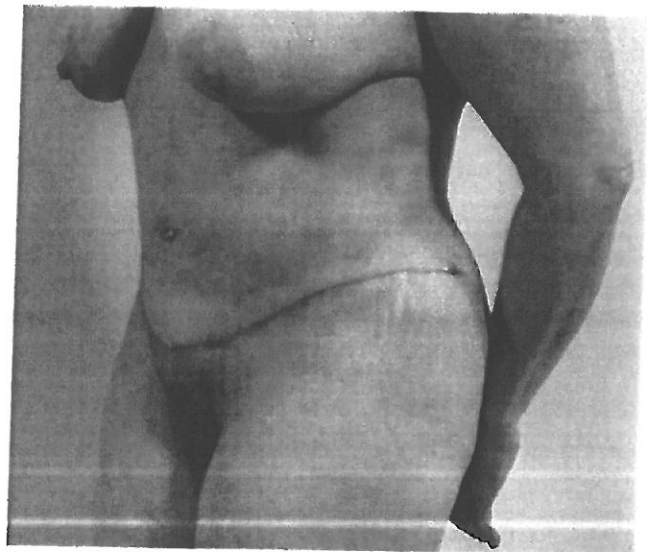


Figure 6. Patient no. 2 final results 2 months after abdominoplasty.

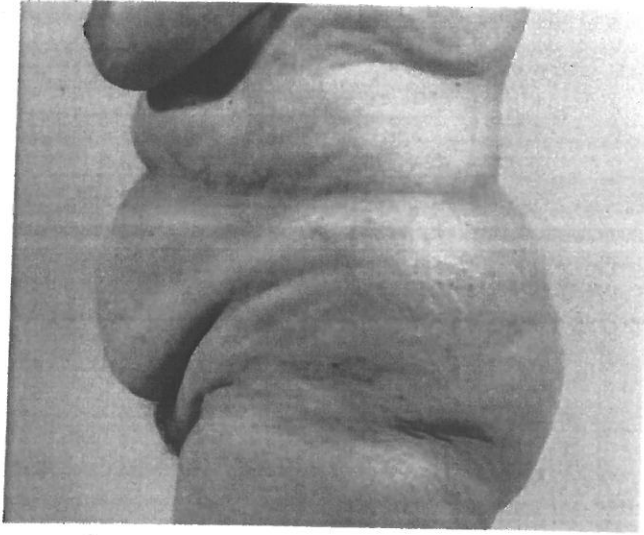


Figure 7. Patient no. 3 before liposuction.

contouring (Figure 7). The patient was postmenopausal, was using a topical hormone replacement therapy, and had a history of depression and anxiety, gastroesophageal reflux disease, restless leg syndrome, herniated disk, diverticulosis, internal hemorrhoids, hyperlipidemia, and vitamin D deficiency. The patient had a surgical history of hysterectomy, colonoscopy, back surgery, right knee surgery, right foot surgery, and left knee arthroscopy. The patient had a preoperative waist measurement of 52 inches. On May 2010, the patient underwent liposuction of the upper abdomen, flanks, back, and mons, sparing the lower abdominal panniculus; 7350 mL of fat (for a total of 8750 mL) was removed. The operation was performed under

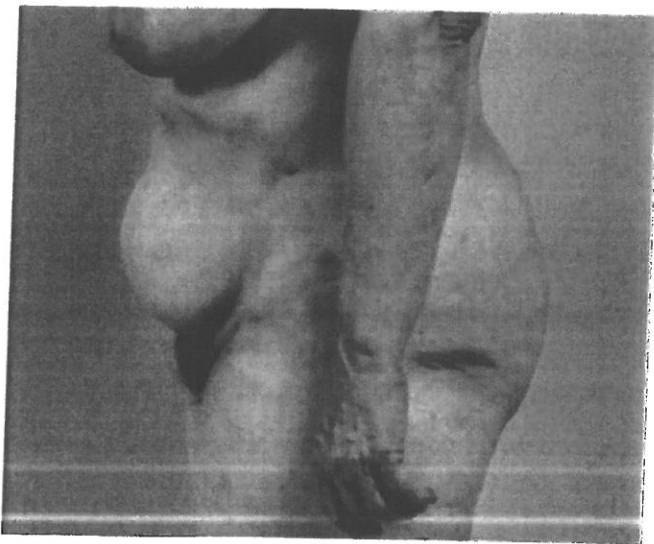


Figure 8. Patient no. 3 after liposuction and before abdominoplasty.

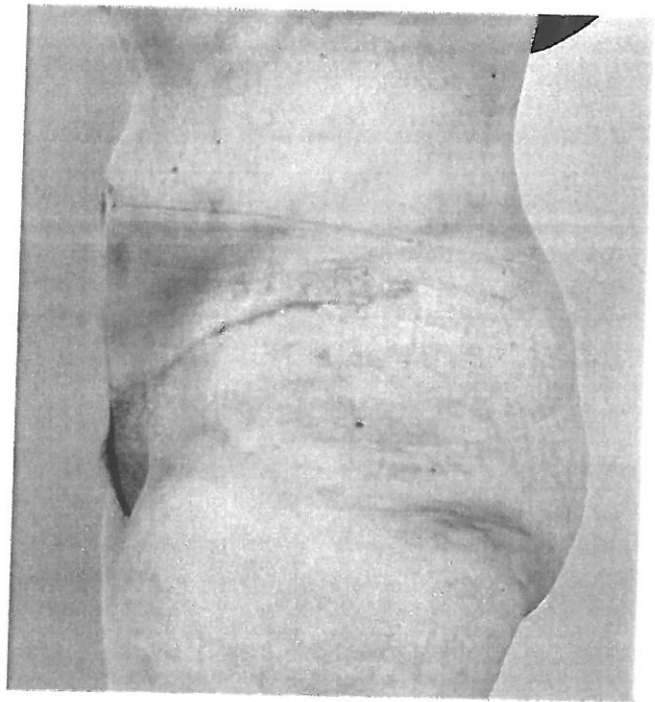


Figure 9. Patient no. 3 final results 3 months after abdominoplasty.

general and tumescent anesthesia with a duration of 1 hour and 36 minutes and no postoperative complications (Figure 8). Fourteen weeks after surgery, the patient had a waist measurement of 38 inches. On October 2010, 5 months after liposuction, the patient underwent abdominoplasty and had no postoperative complications (Figure 9).

Discussion

All 3 patients were obese women who had a BMI >30, adequate preoperative control of their medical conditions, and appropriate medical clearance for surgery, and who wanted abdominal contouring (Table). Each patient was conscious of being overweight and had tried various dietary methods for weight loss with limited results. Each patient presented with excess adiposity, skin excess, and rectus diastasis with myofascial laxity.

Patients were explained that given their excess adiposity, stage 1, liposuction, could involve the removal of great amounts of fat. A dose-response relationship exists between the volume or extent of liposuction and the incidence of post-liposuction complications.² The 3 patients underwent megaliposuction (>6 L of supranatant fat). Given that general anesthesia is used routinely for all procedures performed at our facility, staging the procedures is an adequate choice to minimize risk

Demographic, Health, and Surgical Characteristics of Patients

	Patient 1	Patient 2	Patient 3
Age	44	46	64
Body mass index	33.1	33.3	33.7
Initial waist measurement (inches)	47	44	52
Liposuction fat aspiration (mL)	5425	4750	7350
Duration of liposuction (minutes)	125	79	96
Complications after liposuction	None	None	None
Amount of postoperative ultrasound	0	1	0
Waist measurement after liposuction (inches)	33	33	38
Time between the 2 procedures (months)	3	3	5
Duration of abdominoplasty (minutes)	144	170	Not applicable
Complications after abdominoplasty	1.5-cm flap dehiscence	None	None
Waist measurement after abdominoplasty (inches)	33	33	36

exposure and postoperative complications. It should be noted that, as of today, there is no consensus on the utilization of the best anesthetic technique for conducting abdominoplasty or any of its variants, such as lipoabdominoplasty.^{3,4}

Staging liposuction of the abdominal soft-tissue apron and the surrounding areas can be of great value, especially for patients with incomplete weight loss or those who have moderate to significant excess adiposity.¹ It is useful to improve the natural contour of the entire midsection from the costal margins to the pubic symphysis, in contrast to only performing a traditional abdominoplasty, in which there is no reshaping of the natural curvatures of the anterior and lateral abdominal areas. Also, by thinning the upper abdominal wall during liposuction and preserving adequate vascularity, the area will be adequately prepared for future use during traditional abdominoplasty. This we have seen with these 3 patients described here, who had excellent postoperative results.

This case series is presented as an alternative technique of staging liposuction with subsequent abdominoplasty for obese patients seeking abdominal contouring and for cosmetic surgeons who still prefer to perform a traditional abdominoplasty, maximizing the postoperative cosmetic results while minimizing all possible associated operative risks.

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