

LIPOSUCTION FAT VERSUS TOTAL ASPIRATE: A TIME FOR MORE PRECISE TERMINOLOGY

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Sir:

There continues to be a lack of precision, both in published articles and in presentations at meetings, regarding the amount of fat removed versus the total aspirate.

In my own practice, once the collecting bottle is removed from the suction machine, it is left standing for about 10 to 15 minutes and labeled. This allows the suctioned fat to float to the top. The nurses then record the volume of fat and the volume of aspirate.

This is helpful in a number of ways. I hesitate suctioning more than 3500 cc of fat and prefer to suction 3000 cc or less. By visually seeing the amount of fat removed, I am able to stay within my parameters. I therefore stage procedures and explain the safety issues to my patients.

In addition, when I am working on two sides of the body, I find that I can obtain better symmetry by using two separate collection bottles, because it is the fat removed that is important and not the total aspirate.

Before the surgery, I check carefully for symmetry, both visually and with tape measurements. During the surgery, I am aware of the number of passes in each section, moving from the superficial planes with delicate cannulae to the deeper planes with larger cannulae. Finally, pinch testing is done and the amount of fat removed is checked. These maneuvers help ensure symmetry in both symmetrical and asymmetrical fat deposits.

Finally, I find this to be helpful in calculating fluid balance. Fluid replacement has become more complex since the introduction of tumescent techniques because of the concern of fluid overload. A formula that works in my patients is as follows:

Fat removed ? 2
Plus maintenance (about 2500 cc)
Less tumescent fluid absorbed (total tumescence minus fluid in collection bottle)
Equals the residual amount of fluid to be given intravenously

My current formula for tumescent technique is 1000 cc of Ringer's lactate, 25 cc of 1% plain lidocaine, and 1 cc of 1:1000 adrenaline. I use 2 to 5 liters of tumescent fluid, depending on the size of the fat deposits to be removed. At the conclusion of the procedure, patients are irrigated with dilute Betadine solution using the tumescent set-up (10 cc of Betadine solution in 1000 cc of Ringer's lactate) and resuctioned. Photographs are taken of all specimens. Patients are usually started on an iron preparation (ferrous gluconate one orally twice a day) for 2 to 3 weeks preoperatively and 3 to 4 weeks postoperatively.

I have found that the amount of fat versus the amount of aspirate is widely variable, as shown in Figures 1 and 2.



Fig. 1. A 40-year-old man who underwent abdominal liposuction was tumesced with 4.5 liters of fluid. Of the 3550 cc total aspirate, only 1100 cc was fat. (Bottle 1 contained 2000 cc of total aspirate, of which 500 cc was fat and 1500 was fluid. Bottle 2 contained 800 cc of total aspirate, of which 350 cc was fat and 450 cc was fluid. Bottle 3 contained 750 cc of total aspirate, of which 250 cc was fat and 500 cc was fluid.)



Fig. 2. A 47-year-old woman had symmetrical liposuction of the outer thighs and posterior hips. Aspirate consisted of approximately 925 cc of fat and 175 cc of fluid aspirate from each side after infusing 3 liters of tumescent fluid.

I have operated on approximately 500 patients involving liposuction since studying with Dr. Gerard Illouz in Paris in 1983. During the early years, we were nearly in disbelief that there were so few complications with this procedure. The tumescent technique has given us additional safety and patient comfort, but it also presents the potential for lidocaine toxicity, fluid overload, and complications of mega volumes of liposuction. I continue to maintain a conservative stance. With the high level of safety and patient satisfaction, I have not found it necessary to use ultrasound-assisted liposuction. Since 1983, I have had two localized infections, two contour depressions, and recently my first seroma.

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