

Plastic Surgery Safety

Are Your Cosmetic Surgery Procedures As Safe As They Can Be ?

As consumers push hard for fast and fabulous results, have cosmetic surgeons become overly evasive in their approach to reshaping bodies and faces' ' the experts we talked to antithesis we, combed certainly suggest so.

The risks

Today's most popular cosmetic surgical procedure is liposuction, with breast augmentation running a pretty close second. Demand for abdominoplasty has grown by 71 percent in, just four years, according to the American Society of Plastic Surgeons. Liposuction and abdominoplasty pose the most life-threatening clinical risks and stacking these procedures makes the risk 14 times greater, according to one study. NN~Yrile no one knows exactly how often liposuction and/or abdominoplasty results in death, recent, research suggests it may happen as often as once every: 5,000 cases or even once every 1,000 cases. In contrast, according to a report cited by Rudolph de Jong, AID, of the Thomas Jefferson Medical College in Philadelphia , the death rate for elective hernia procedures is just three in 100,000. The most common fatal complication of abdominoplasty or liposuction is pulmonary embolism. Researchers say pulmonary thromboembolism, in particular, is the direct cause of one-quarter of cosmetic surgery-related deaths. "Deep vein thrombosis with pulmonary embolism is probably the most fearful situation for plastic surgeons, more so than cardiac arrest," says Henry Mentz, III, MD, FACS, FIGS, a surgeon with the Aesthetic Center for Plastic Surgery in Houston . "This call come on very quickly, and W is something that can and sloes happen in every plastic surgery practice." To put this in perspective, during the past five yews, office physicians in Florida have reported 25 cosmetic surgery-related deaths, six of which were directly attributed to pulmonary embolism after abdominoplasty, liposuction or combined abdominoplasty-liposuction, according to Brett. M. Coldiron, NID, FRCP, clinical assistant professor with the University of Cincinnati College of Medicines Department of Dermatology. Other documented complications leading to death after cosmetic surgery, according to a report by a group of forensic pathologists, include fluid overload and lidocaine and epinephrine toxicity. Fatal perforations of the abdominal cavity have also been reported, and clinicians say hypothermia is a significant concern. Temperature is of critical importance," says M. Dean Vistnes, NID, FAGS, of Vistnes Plastic Surgery in Palo Alto, Calif. , and tile Stanford University Hospital Department of Surgery. "Typically, these patients are largely exposed, and liposuction patients are injected with large amounts of sometimes cool fluids. Loss of body heat can alter the clotting mechanism and the response to anesthesia, and generally make it a lot harder for the physician to treat other complications that may arise.

Controversial causes

There are inherent risks to surgery no matter how, you slice it, but in the realm of major cosmetic surgery, there is substantial confusion and finger pointing over the additional causes of fatal complications. Clinicians point to three reasons grave problems develop in otherwise healthy patients.

- *Procedure stacking.*

Research clearly shows that performing multiple cosmetic procedures in one operation, especially when one procedure is abdominoplasty, increases the risk of grave complications no matter how good the quality of care. In two Florida cases that resulted in death from pulmonary emboli, a board of medicine reviewer found no evidence of inadequate care. Rather, say experts, this increased risk is likely due to their physiologic insult combined with the inherent risk of general anesthesia and post-op immobility.

"When you perform abdominoplasty you are essentially tightening the abdominal wall and darn create considerable internal compression which, along with post-op pain, inhibits the patient's pulmonary compliance," explains Dr. Vistnes. "Add to this insult from the liposuction, such as possible fluid overload, and you can see how you're just adding one thing on top of another." Notes Dr. Mentz:

"Abdominoplasty can also put back pressure on the vena cava so the deep veins don't strain as well, and this pushes blood back into the legs. Combine this with the post-op immobilization that occurs due to pain — and the fact that anyone who is asleep on the table for any procedure has a risk of DVT to begin with— and you can see why this can trigger clot formation in the large femoral vein, which acts like an interstate highway directly through the heart and into the lung. This can kill."

Observers cite two motives for procedure stacking: economics and patient demand. The financial lure of these popular, out-of-pocket procedures is real, with patients paying an average \$6,500 for abdominoplasty and between \$1,500 and \$3,000 per liposuction site. And TV shows like "Extreme Makeover" have prompted patients to seek out fast and aggressive cosmetic surgery solutions.

- *Liposuction approach*

Although physicians can combine various techniques and anesthesia approaches, there are two basic ways they perform liposuction, and proponents of each approach target the other as riskier for the patient, especially when the procedure involves rotating lots of fat. The first approach is the safest technique, during which the surgeon infuses epinephrine-containing saline subcutaneously and aspirates the infiltrate and fat in, ideally, a one-to-one ratio with the patient under general anesthesia. The epinephrine constricts blood vessels and

minimizes blood loss. The second is the tumescent technique, which does not, require general anesthesia. Rather, the infiltrate also contains lidocaine for local anesthesia, and physicians pre-inject larger volumes of it in an approximate three-to-one ratio. This causes the fatty tissue to become swollen and firm, or tumescent, so the fatty area becomes easier to identify and remove. While proponents of the super wet approach agree that tumescent liposuction often makes sense for small-volume procedures, they say general anesthesia provides a safety measure during higher-volume procedures. "Airway control is a very good reason to use general anesthesia, especially when the patient is prone," says Dr. Vistnes. Higher-volume procedures take longer using the tumescent technique and, he says, after several hours patients can get fidgety, start to feel pain and require narcotics. "If the prone patient experiences pain and you give more narcotics or sedation intraoperatively, you can lose control of the airway," he says. Dr. Vistnes also notes that higher volume procedures require such large amounts of infiltrate when using tumescent technique that this approach can place the patient at undue risk for fluid overload and lidocaine/epitriptine toxicity -- both fatal complications that have been documented after tumescent technique.

When Henry Mentz, III, MD, FACS, FICS, and his colleagues at The Aesthetic Center for Plastic Surgery in Houston, Texas, did an internal risk analysis and decided to continue performing combination abdominoplasty-liposuction procedures, they also decided that they needed to institute every safety measure they felt they possibly could. One of those measures was to ensure that they could monitor patients overnight when needed. Being that their facility was licensed as an ASC in Texas, however, they were not allowed — until, that is, they banded together and lobbied their state Department of Health Services for a rule change. They got it, and although the proposed rule change is not final as of this writing, Dr. Mentz is decidedly optimistic. The rule change allows for "extended observation" after PACU discharge and applies to patients who do not require overnight "hospitalization" or "extensive recovery, convalescent time or observation."

Dr. Mentz plans to keep patients meeting any two of the following criteria overnight: over 50 years of age, smoking history, surgery longer than two hours to three hours, abdominoplasty, face lift and large-volume liposuction. hands.

"Under general anesthesia, there is no feedback, and doctors make mistakes when there is no feedback," he says. "With liposuction, all we have is our sense of touch and without it as our guide, doctor-contributor to liposuction-related complications. Dr. de Jong reported that liposuction can cause extensive subsurface trauma comparable in many ways to the "massive injury" of an internal burn, tear feeders can inject too much fluid without realizing it, they can take out too much fat, and they can get reckless with the cannula and create lots of trauma, including abdominal perforation

Researchers have implicated surgical trauma as are vessels, mobilize fat globules and create profound metabolic changes. And although tumescent technique can take significantly longer, it once took Dr. Lack three-and-a-half hours to remove 10 liters of fat, its proponents say it's not traumatic when performed with the necessary skill. Besides letting the physician "feel," involves microcannulas that users say are easier to navigate through tissue. "There is endoscopic evidence that blood supply remains intact after properly performed tumescent anesthesia," claims Dr. Lack. "Doing liposuction any other way is doing a disservice to the patient." To be fair, however, the dividing line between the two approaches is not always so tidy. Tumescent practitioners often sedate patients, sometimes deeply, with medications, and extensive IV sedation has led to fatal anesthesia-related complications according to one Tampa, Fla.-based anesthesiologist who has worked with the Florida Board of Medicine. "B' sedation is supposed to be conscious sedation," adds Dr. Lack, who sometimes uses a cocktail of propofol, versed and fentanyl during his tumescent liposuction procedures. "But some are using it as 'unconscious' sedation and are pretending otherwise." One key to minimizing the need for deep IV sedation, he adds, is to inject the lidocaine-containing infiltrate about one hour before surgery so it can take full effect.

- *Inadequate patient management*

Many say another cause of potentially fatal complications is a pattern of poor patient management that includes lax patient selection, insufficient attention to fluid management and a general lack of emergency preparedness.

While the physiologic demands of modern cosmetic procedures grow exponentially as the procedures become more traumatic, the understanding of these demands hasn't kept pace. There remains, as Dr. de Jong puts it, an "illusion of technical simplicity in pockets of the medical community when it comes to cosmetic surgery, because the procedures are elective, patients aren't ill and it wasn't that long ago that most cosmetic procedures were much less benign than they are today. As Dr. Vistnes puts it, some physicians who started out performing small volume liposuction (good results advanced too quickly into larger-volume liposuction) began containing them with other procedures, without attempting to learn less-traumatic techniques or even realizing they were crossing an important tissue-trauma threshold. Some argue there isn't enough regulatory oversight of the office setting, where many of these procedures are performed. Since offices are generally subject to less regulatory oversight than ASCs and hospitals, detractors say- they offer a venue for aggressive, ill-prepared practitioners who don't have privileges to perform these procedures in hospitals. Yet, no one is certain if any one setting is safer than another.