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“Extreme” Cosmetic Surgery: A Retrospective Study of Morbidity in Patients Undergoing Combined Procedures

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Background: It is increasingly common for patients to request that multiple cosmetic procedures be performed during a single operation. The advantages of combined procedures include a single recovery period, reduced surgery costs, and faster patient gratification. Traditional surgical thinking, however, has favored the performance of some procedures individually in an effort to decrease complications associated with prolonged anesthesia.

Objective: The goal of this study was to determine whether performance of combined cosmetic surgery procedures results in increased morbidity.

Methods: Two hundred forty-eight abdominoplasties performed by the same surgeon over a 10-year period were reviewed retrospectively. Four groups of procedures were compared: abdominoplasty alone, abdominoplasty combined with breast surgery, abdominoplasty combined with facial surgery, and abdominoplasty combined with both breast and facial surgery.

Results: No statistically significant differences in complication rates were found among the four groups. The prevalence of morbidity in all groups compared favorably to the parameters established in previous reviews.

Conclusions: The results of this retrospective review do not indicate that the combination of cosmetic surgical procedures increases morbidity. The potential benefits of combined procedures may be considered with the expectation of comparably low complication rates. (Aesthetic Surg J 2004;24:314-318)

It is increasingly common for patients to request that multiple cosmetic procedures be performed during a single operation. Advantages of combined procedures include a single recovery period, reduced surgery costs, and faster patient gratification. Despite patient demand, in the past some combinations of procedure were less common because of technical constraints, as well as concerns about prolonged surgery time and increased morbidity.

In the inpatient reconstructive setting, hospital stays have become shorter because of economic pressure and advances in surgical techniques, anesthesia, pharmacology, and postoperative care. This changing medical climate, in conjunction with a growing patient demand for aesthetic procedures, has inspired an evolution in the practice of cosmetic surgery to include more frequent combined procedures and shorter recovery periods in the outpatient cosmetic surgery setting. But has this transition been a safe one?

Traditional surgical thinking favors performance of some procedures individually in an effort to minimize morbidity and avoid complications associated with prolonged anesthesia. In elective cosmetic surgery, optimal safety and minimal morbidity are of paramount importance. Evidence has shown that the combination of abdominoplasty with intra-abdominal surgery may increase the risk of serious complications such as thromboembolism and death.¹ It is unclear whether the combination of multiple cosmetic surgery procedures increases the incidence of major or minor complications. Concerns have included an increased need for blood transfusions, prolonged hospital stays and immobility, and an increased risk of deep-vein thrombosis and pulmonary embolism.

The goal of this study was to compare the morbidity associated with abdominoplasty alone to that associated with abdominoplasty combined with other cosmetic

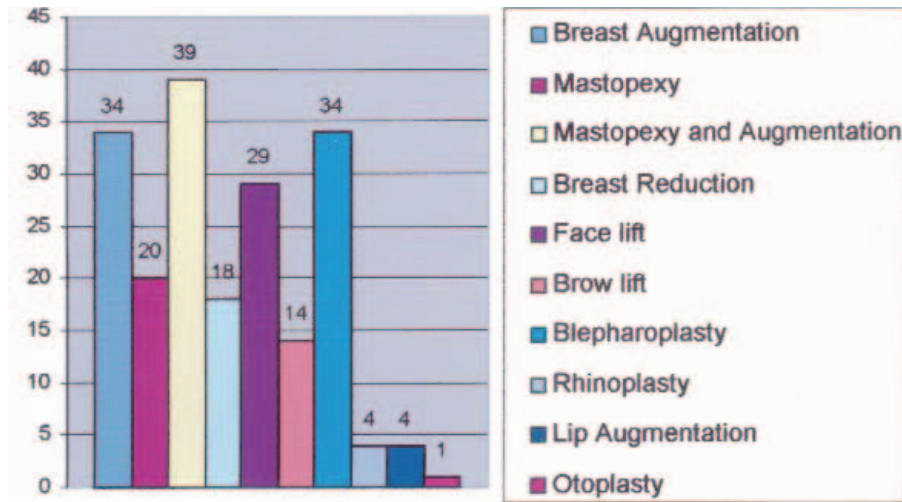


Figure. Distribution of procedures combined with abdominoplasty in groups 2, 3, and 4.

procedures. We hypothesized that the evolution of medicine and surgery now permits multiple cosmetic procedures to be performed simultaneously without increased morbidity.

Methods

We conducted a retrospective review of 248 abdominoplasties performed by the same surgeon at 1 outpatient facility over a 10-year period. Cases were divided into 4 groups: abdominoplasty alone, abdominoplasty combined with breast surgery, abdominoplasty combined with facial surgery, and abdominoplasty combined with both breast and facial surgery. Minor complications assessed included seroma, hematoma, infection, and small (<5 cm) wound breakdown. Major adverse outcomes evaluated include large (>5 cm) flap necrosis, the necessity for blood transfusion, deep-vein thrombosis, pulmonary embolus, myocardial infarction, and death. Additional data compiled included age, sex, tobacco use, body-mass index (BMI), medical history, and surgical time. We also recorded the volume of lipoplasty aspirate.

All patients received general anesthesia, intraoperative sequential compression stockings, and perioperative antimicrobial coverage. When adjunctive lipoplasty was performed, aggressive treatment of the central abdomen was avoided to minimize interference with the blood supply to the distal flap.⁷ Neither Foley catheters nor bedpans were used, and all patients walked within 1 hour of awakening from anesthesia. Patients were transferred to an aftercare facility, walked intermittently, and administered oral pain medication.

Results

One hundred patients undergoing abdominoplasty alone (group 1) were compared with patients who underwent abdominoplasty in conjunction with combined procedures. The specific procedures performed in conjunction with abdominoplasty are shown in the Figure. Thirty-nine patients underwent combined abdominal and facial surgery (group 2), 98 underwent combined abdominal and breast surgery (group 3), and 11 underwent abdominal surgery combined with both facial and breast surgery (group 4). Minor complications are summarized in Table 1. No significant differences in minor complications were seen among the procedure groups ($\chi^2 = 1.31$; $P = 0.71$, NS).

In an attempt to define other variables that may contribute to a higher rate of abdominoplasty complications, age, BMI, lipoplasty volume, and operative time were also reviewed. The average age of group 2 patients who underwent a facial rejuvenation procedure was higher than that of groups 1 and 3 (Table 2). However, we detected no apparent correlation between the incidence of complications and greater age. Similarly, the average operative times of patients in whom complications occurred were not longer than those for patients who did not experience complications. All combined operations were performed in less than 5 hours.

With respect to lipoplasty volumes, the average volume aspirated in each group was compared with that of the subset of patients in that group who experienced a complication. More than 90% of all patients in this study underwent some degree of adjunctive lipoplasty.

Table 1. Minor complications after abdominoplasty

Group	Seroma	Hematoma	Wound breakdown	Infection	Total	%
1	11	2	6	0	19	19
2	4	0	1	0	5	13
3	8	0	5	2	15	15
4	1	0	0	0	1	9

Table 2. Variables affecting morbidity after abdominoplasty

Variable	Group 1	Group 2	Group 3
Average age (y)	43.4	50.2	44.7
Average age with complications	43.2	51.5	44.1
Average lipoplasty volume (mL)	1984	1588	1748
Average lipoplasty volume with complications (mL)	1808	1038	1842
Average surgical time (min)	100	180	148
Average surgical time with complications (min)	93	169	150

Table 3. Complications of abdominoplasty in patients, by BMI

BMI	No. of patients	Complications	(%)
19–24	115	20	(17)
25–29	79	14	(18)
30–34	29	4	(14)
>34	5	1	(20)

Those who did not undergo lipoplasty were excluded from this comparison and not averaged into the whole-group calculation. The average lipoplasty aspirate volume for patients with complications did not exceed the total-group averages.

BMI was calculated for all patients in the study. Most patients had BMIs of less than 30. When dividing these patients into groups of BMI less than 25, 25 to 29, 30 to 34, and greater than 34, we found no significant increase in complications as BMI increased ($\chi^2 = 0.28$; $P = .96$, NS; Table 3).

In the most extreme combination of cosmetic procedures (group 4), abdominoplasty procedures were performed in conjunction with both breast and facial aesthetic surgery. In this group of patients, the average age was 48.6 years, average BMI was 23.4, average lipoplasty volume was 1615 mL, and average operative time was 185 minutes. Even though this group comprised relatively few patients ($n = 11$), these parameters were

not substantially discordant with those of the other groups, and only 1 complication (9%) was identified.

Discussion

This retrospective review of 248 abdominoplasties provides evidence that combined cosmetic procedures are not associated with increased patient morbidity. No significant difference in complication rates was found among the 4 groups of patients. The combined prevalence of morbidity compared favorably with the parameters established in reviews by Grazer and Goldwyn,⁶ Hensel,⁹ and others. In 2000, Chaouat et al,⁵ in a retrospective study of 258 women who underwent abdominoplasty, assessed complication rates. Postoperative complications occurred in 22% of the patients in that study.

There is no question that individual and combined cosmetic procedures are becoming more frequent. In particular, the increasing prevalence and success of gastric

bypass surgery is creating a growing pool of candidates for multiple procedures. But are the past concerns regarding the safety of this practice still valid?

In 1982, Pitanguay and Ceravolo² reported no increased incidence of complications associated with combined procedures but did not present any supporting data to substantiate this claim. They did report a 25% blood transfusion rate for patients undergoing combined mammoplasty and abdominoplasty and a 20% transfusion rate for those having undergone combined rhytidectomy and abdominoplasty. Similarly, Savage³ reported the routine type and cross-matching of blood for combined procedures but cited the decreased cost, operative time, and hospital stay as benefits of this practice. By contrast, in our study no patient received a blood transfusion, a factor in the effectiveness of modern techniques for combined procedures in achieving minimal increased morbidity.

In 1989, Hester et al⁷ presented a 10-year experience comprising 563 abdominoplasties. They reported a 17.6% transfusion rate for combined aesthetic procedures versus a 3.4% rate in patients undergoing abdominoplasty alone. Nineteen percent of patients in this study who underwent combined cosmetic procedures stayed in the hospital for more than 7 days.

Additional evidence of the evolving medical climate and improved clinical knowledge with respect to combined surgery is the decreased need for hospitalization after the combined procedures in our series. Presumably, shorter hospital stays should increase early ambulation and decrease serious morbidities such as deep vein thrombosis. De Castro and Daher⁴ reported “no problems” in 30 procedures in which breast reduction was combined with abdominoplasty, but all patients were hospitalized for at least 3 days. Van Uchelen¹⁰ presented the complication rates of 101 consecutive patients who underwent abdominoplasty and found that 15% of female patients and 64% of male patients suffered a complication. In his study, patients were hospitalized for 5 days.

In 1977, Grazer and Goldwyn⁶ reported on 10,490 abdominoplasties, using data from questionnaires sent to American Society of Plastic and Reconstructive Surgery members. Only 35% of patients were ambulatory within 24 hours, and 10% of patients did not walk for the first time until more than 4 days after surgery. They found a 7.3% incidence of infection, a 5.4% incidence of dehiscence, a 1.1% incidence of deep-vein thrombosis, a 0.8% incidence of pulmonary embolus, and a 0.02% incidence

of death. Sixteen percent of surgeons reported problems with a postoperative ileus, and 4% noted small bowel obstruction complications. The authors reported that they “are also aware of several deaths that were not reported in this survey.” This frequently cited analysis was obtained from the reports of 956 surgeons. In the study reported in this article, the data are based on the procedures of one surgeon, the senior author, who meticulously tracked his patients’ complications. It is extremely unlikely that a serious complication such as pulmonary embolism or death went unidentified in this review.

Hypertrophic or aesthetically unpleasant scar formation was not considered a complication in this study. Although wound tension and other surgical factors may contribute to excess scar development, predisposing genetic factors undoubtedly play a pivotal role in suboptimal cosmetic healing. Furthermore, other minor complications, such as small-wound breakdown or infection, may result in wide or thick scarring. In these instances, morbidity was defined by the inciting complication and not the resultant poor scarring.

Perhaps the slight increase in seroma incidence in the abdominoplasty-alone group may be attributed to a greater tendency toward earlier increased activity and less time for the flap to heal down to the abdominal wall, obliterating any potential space.

Conclusion

The results of this retrospective review show no increase in morbidity among patients who have undergone combined cosmetic surgical procedures. This finding must be viewed in the context of the healthy patient population selected to undergo these procedures. Nonetheless, the potential benefits of combined procedures may be considered with the expectation of comparably low complication rates. Medicine continues to evolve, as do the needs and desires of patients. Our understanding of safe practice boundaries grows in conjunction with advancing medical abilities. It has become clear that multiday hospital stays and blood transfusions are unnecessary in the care of a patient undergoing abdominoplasty. This study adds evidence that combined cosmetic procedures may not be associated with increased morbidity and may yield higher patient satisfaction. As long as we scrutinize our care and strictly adhere to the principle of “do no harm,” plastic surgery techniques will continue to evolve with the goal of improving both safety and patient satisfaction. ■

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