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Lipoabdominoplasty: Comparing Ultrasound-Assisted and Power-Assisted Techniques

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Abstract

Introduction: Optimizing the abdomen aesthetic appearance may combine liposculpture, abdominoplasty, and postsurgical noninvasive body sculpting. The abdominoplasty traditional technique highlights abdominal flap undermining. The Avelar or Saldana lipoabdominoplasty's technique modifications use liposuction and the absence of undermining of the abdominal wall flap. This method maintains abdominal wall vascularization and lessens complications. Two commonly employed liposuction techniques are power-assisted and ultrasound-assisted liposuction. Combining power-assisted technology with the Separation, Aspiration, Fat Equalization (SAFE) liposuction process has improved aesthetic results and reduced complications. Separation, Aspiration, Fat Equalization liposuction process enrolls separation, aspiration, and fat equalization steps. Ultrasound-assisted liposuction advantages include high-definition body sculpting through maximum fat removal and skin tightening with less blood loss and viable fat for grafting. This clinical study evaluated a comprehensive surgical protocol for lipoabdominoplasty designed to minimize complications. In addition, the study assessed aesthetic outcome and complication differences comparing the use of ultrasound-assisted versus power-assisted liposuction. **Materials and Methods:** This is a retrospective study in a single surgeon's private cosmetic practice in 2 practice locations in patients undergoing a modified lipoabdominoplasty technique over a 2-year period. **Results:** Modified lipoabdominoplasty combining power-assisted technology with SAFE liposuction (n = 30) compared to those using ultrasound-assisted liposuction (n = 20) revealed similar complication rates. Surgeon observation revealed better skin contour smoothness, more abdominal definition and skin tightening with less bruising when using ultrasound liposuction. The comprehensive surgical protocol designed to minimize perioperative complications was implemented on each patient and resulted in no medical errors and a low major and minor complication rate. **Conclusions:** The lipoabdominoplasty surgical protocol provides surgeon's comprehensive preoperative, intraoperative, and postoperative guidelines to minimize complications. Higher body mass index increased the complication rate. The aesthetic outcome using ultrasound-assisted liposuction appeared to yield better aesthetic sculpted appearance with less bruising compared to power-assisted technology.

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