

# Patient Selection Optimization following Combined Abdominal Procedures: Analysis of 4925 Patients Undergoing Panniculectomy/Abdominoplasty with or without Concurrent Hernia Repair

Pieter G. L. Koolen, M.D.  
Ahmed M. S. Ibrahim, M.D.  
Kuylhee Kim, M.D.  
Hani H. Sinno, M.D., M.Eng.  
Bernard T. Lee, M.D., M.B.A.  
Benjamin E. Schneider, M.D.  
Daniel B. Jones, M.D., M.S.  
Samuel J. Lin, M.D.

Boston, Mass.; and Montreal,  
Quebec, Canada



**Background:** Massive weight loss following bariatric surgery causes unwanted excess skin and subcutaneous tissue. Intraoperative abdominal wall exposure during abdominal contouring surgery provides the possibility for concurrent ventral, umbilical, or inguinal hernia repair. The authors evaluated the incidence of postoperative complications following abdominal contouring surgery with or without concurrent hernia repair and the impact of surgical specialty.

**Methods:** Analysis of patients undergoing abdominal contouring surgery with or without concurrent hernia repair was performed using the American College of Surgeons National Surgical Quality Improvement Program from 2005 to 2011. The incidence of postoperative complications was determined. Logistic regression assessed influence of demographics and comorbidities on postoperative outcomes. Control group (body mass index > 27.5) and high-risk group (body mass index > 40) undergoing a hernia repair were also included for comparison.

**Results:** Among 4925 patients, 63.7 percent underwent abdominoplasty and/or panniculectomy only; 36.3 percent underwent a simultaneous hernia repair. The abdominal contouring surgery with simultaneous hernia repair group had a higher complication rate than the abdominal contouring surgery group (18.3 percent versus 9.8 percent,  $p < 0.001$ ). Body mass index was associated with increased wound complications and major complications in both groups. Diabetes, smoking, chronic steroid use, and hypertension increased wound complications in the abdominal contouring surgery/hernia repair group.

**Conclusions:** Patients undergoing hernia repair with abdominal contouring surgery may have higher postoperative complication rates than after abdominal contouring surgery alone. Hypertension, smoking, and chronic steroid use were predictors for negative outcomes. Furthermore, surgical specialty is associated with significantly different complication rates. (*Plast. Reconstr. Surg.* 134: 539e, 2014.)

**CLINICAL QUESTION/LEVEL OF EVIDENCE:** Therapeutic, III.

Obesity is a chronic disorder that has become more prevalent over the past few years. Recently, the American Medical

Association declared obesity a disease. Over 30 percent of adults have a body mass index exceeding 30 kg/m<sup>2</sup>.<sup>1,2</sup> Data from the Behavioral Risk Factor Surveillance System of the Centers for Disease Control and Prevention showed a 1.1 percent growth in the nationally reported prevalence of

*From the Division of Plastic Surgery and the Division of Bariatric Surgery, Department of Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School; and the Division of Plastic Surgery, Jewish General Hospital, McGill University. Received for publication November 12, 2013; accepted February 14, 2014.*

Copyright © 2014 by the American Society of Plastic Surgeons

DOI: 10.1097/PRS.0000000000000519

**Disclosures:** The authors have no financial interest to declare in relation to the content of this article. There was no internal or external financial support for this study.