

Dennis Hurwitz

Comprehensive Body Contouring

Theory and Practice

EXTRAS ONLINE



Springer

Comprehensive Body Contouring

Dennis Hurwitz

Comprehensive Body Contouring

Theory and Practice

Dennis Hurwitz
University of Pittsburgh Medical Center
Pittsburgh, PA
USA

Videos can also be accessed at
<http://link.springer.com/book/10.1007/978-3-662-46976-7>

ISBN 978-3-662-46975-0 ISBN 978-3-662-46976-7 (eBook)
DOI 10.1007/978-3-662-46976-7

Library of Congress Control Number: 2015951816

Springer Heidelberg New York Dordrecht London
© Springer International Publishing Switzerland 2016

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

Springer-Verlag GmbH Berlin Heidelberg is part of Springer Science+Business Media
(www.springer.com)

Preface

Three years since after signing an agreement with Springer-Verlag to write my complete approach to body contouring surgery, I turned in this manuscript. I completely revised it several times and had to wait many months for the final revised drawings from our brilliant Brazilian artist, Luiz Goncalves. We believe it was worth the wait, because now we present a timely and readable experiential window to this new discipline of plastic surgery.

Part of the problem was, like all practicing plastic surgeons, I am a part-time writer with substantial clinical and academic responsibilities. Accumulating cases and writing after hours can be exhausting and as such not always productive. From the beginning, I began this book with aesthetic and technical basics and then followed on procedure specifics exemplified in clinical teaching cases. At first, I fell into the trap of organizing the second part of the book by region such as the lower body and thigh and by structure such as the breast. That is the traditional way that a plastic surgeon thinks and that is how these aesthetic challenges tend to be taught at meetings. As the challenges of gender dysmorphia and their solutions became more apparent, a reorganization to a chapter on women followed by one on men was obvious. This book change led to an entire new gender-specific approach that I now apply to my body contouring surgery candidate. They get it and appreciate that I do. My increasing experience and unique perspective on facelift surgery led to a separate final chapter on that subject.

The delay in publication was also due to the fact that 18 months ago, I acquired for my office operating room, the latest technology for ultrasound-assisted lipoplasty (UAL), the VASER. I was intrigued by its hardy adoption by world-acclaimed liposculpturist, Dr. Alfredo Hoyos. I was also impressed by the well-conducted relevant experimental surgery and clinical outcomes of Miami plastic surgeon, Dr. Onelia Garcia. They clarified the incredible effectiveness and safety of VASERlipo when used in skilled hands. Long an advocate of UAL, I was no stranger to VASER. In 1995, I had worked with physicist Bill Cimino on the early development of this advanced technology. I enjoyed the ease of application and generally smooth results, but was unappreciative of its remarkable selectivity for fat emulsification. After renting it for 10 years, my hospital would not purchase a new machine, and so I then limited UAL to the use of the LySonix. Prolonged induration, pain, and paresthesia were an occasional annoyance that I chose to ignore. Not only did these patient complaints disappear but with the new VASER, we gained the added advantage in efficient harvesting of considerable quantities of graftable

fat that we now readily use for buttock and breast augmentation. The ease of obtaining fat from heavily fibrous backs and chest and scarred areas of prior liposuction and surgery initiated novel efficient approaches to treating contour deformities secondary to prior surgery. The publisher and I patiently waited until greater than 6 months' results in a dozen patients confirmed the efficacy of my thoughtful use of VASER.

VASER is one of several products, notably Quill barbed sutures, that I have championed throughout the book. While up to several years ago I was an occasional paid dinner speaker for Quill owner Angiotech Pharmaceuticals, now Surgical Specialties Corporation, I declare no financial conflict of interest in any product mentioned in this book. All case presentations were approved by the patients for publication. We are very grateful for their consent, for there were many others who declined to assist in this teaching effort. I am also grateful to my loving marriage partner of 46 years, Linda, who has encouraged me in this effort.

This book is about sharing my clinical innovation and reflective experience. I offer what I believe, but cannot scientifically prove, to be true in comprehensive body contouring surgery. I aspire the book to be an enjoyable and thoughtful learning experience that will change and improve the way fellow plastic surgeons practice our wonderful craft.

Pittsburgh, PA, USA

Dennis Hurwitz, MD

Contents

1	Introduction	1
	References	4
2	Aesthetics, Examination, and Care	5
2.1	Aesthetic Surgical Anatomy	5
2.2	Relevant Female Aesthetics	6
2.3	Relevant Male Aesthetics	9
2.4	Evaluating Disordered Female Anatomy	12
2.5	Evaluating Distorted Male Anatomy	21
2.6	Safety Measures in Body Contouring: Perioperative Care . .	22
2.6.1	Preoperative Assessment	22
2.6.2	Intraoperative Assessment	24
2.6.3	Postoperative Care	25
	References	25
3	Principles and Basic Techniques	27
3.1	Coordination of Multiple Procedures	27
3.2	Principles of Treatment	28
3.2.1	Analysis of Deformity and Patient Preparation	28
3.2.2	Efficiency in Design, Organization, and Execution . .	30
3.2.3	Optimal Horizontal, Vertical, or Oblique Tissue Excision	33
3.2.4	Accurate Preoperative Incision Planning	36
3.2.5	Focus on Contour and Shape	38
3.2.6	Contour with Autologous Tissues	38
3.2.7	Integration of Liposuction with Excisional Surgery .	40
3.2.8	Preservation of Dermis, Subcutaneous Fascia, and Neurovascular	45
3.2.9	Secure High-Tension Wound Closure	46
3.2.10	Anticipatory Perioperative Management	51
3.2.11	Long-Term Analysis of Patient Outcomes	52
	Appendix 1: Consent	55
	Consent for Surgery	60
	References	61
4	Body Contouring Surgery for Women	63
4.1	Background: Enhancing Female Features	63
4.1.1	Case 4.1 Androgynous to Feminine Form	65

4.1.2	Case 4.2 Feminizing an older MWL patient	68
4.2	Integrating Central High-Tension Lipoabdominoplasty	70
4.2.1	Case 4.3 High Central Tension Lipoabdominoplasty with VASERlipo of the Back and Upper Thighs and Lipoaugmentation of the Buttocks	70
4.2.2	Case 4.4 Central High-Tension Lipoabdominoplasty with TBL	71
4.3	Lower Body Lift Combined with Spiral Thighplasty	81
4.3.1	Case 4.5 Severe Skin Laxity for LBL, Spiral Thighplasty	82
4.3.2	Case 4.6 LBL and Spiral Thighplasty with Minimal Skin Laxity	92
4.3.3	Case 4.7 with Severe Skin Laxity in Older Patient . .	99
4.3.4	Case 4.8 Obese Lower Body and Thighs	101
4.3.5	Case 4.9 Twice Recurrent Saddlebag Deformity	104
4.3.6	Refinements in Lower Torso and Thighplasty	104
4.4	Upper Body Lift Simultaneous with Spiral Flap Reshaping of the Breast and L-Brachioplasty	106
4.4.1	Case 4.10 Severe Back Rolls in an Overweight Patient with Transverse Back Scar	114
4.4.2	Case 4.11 Spiral Flap with Secondary Breast Implants	115
4.4.3	Case 4.12 Two-Stage TBL with Spiral Flap, Transverse Incomplete UBL	120
4.4.4	Case 4.13 Spiral Reshaping in Overweight with a Supine Single-Stage TBL	133
4.4.5	Case 4.14 Spiral Breast Reshaping with Thin Donor Site in Single-Stage TBL	134
4.4.6	Case 4.15 Single-Stage TBL, Spiral Breast Reshaping in Overweight Patient	134
4.4.7	Keystone Role of Abdominoplasty	134
4.4.8	Total Body Lift with Spiral Flap and J-Torsoplasty	141
4.4.9	Case 4.16 Single-Stage TBL with J-Torsoplasty Spiral Flap	143
4.4.10	Case 4.17 Two-Stage TBL in Overweight Patient, Secondary VASERlipo	157
4.4.11	Case 4.18 Staged TBL: Spiral Thighs Then Spiral Breast/J-Torsoplasty with Low BMI	165
4.4.12	Case 4.19 L Brachioplasty with Excision Site Liposuction, LBL, Abdominoplasty, and Spiral Thighplasty with Vertical Extension	166
4.5	J-Torsoplasty Combined with L-Brachioplasty	169
4.5.1	Case 4.20 L-Brachioplasty with Liposuction Followed by Secondary VASERlipo	170
4.6	Mommy Makeovers with Spiral Flap Reshaping and Barbed Suture Suspension Mastopexies	170
4.6.1	Case 4.21 Spiral Flap Breast with J-Torsoplasty Mommy Makeover	171

4.6.2	Case 4.22 Quill Suspension Mastopexy and Secondary VASERlipo	171
4.6.3	Case 4.23 Quill Suspension Mastopexy.....	176
4.7	Summary of Comprehensive Body Contouring in Women ..	177
	References.....	179
5	Body Contouring Surgery for Men	181
5.1	Background	181
5.2	VASERlipo to Enhance Muscular Show in Case 5.1.....	183
5.2.1	Case 5.1 VASERlipo of Torso	183
5.3	Goals, Analysis, and Planning	183
5.4	Boomerang Pattern Correction of Gynecomastia	186
5.4.1	Case 5.2 Boomerang/Transverse UBL with UAL ...	186
5.4.2	Case 5.3 Boomerang Gynecomastia with J-Torsoplasty	187
5.4.3	Case 5.4 Delayed Boomerang/J-Torsoplasty in Mild Deformity	192
5.4.4	Case 5.5 Boomerang/J-Torso for Secondary Correction.....	194
5.5	TBL Surgery Including Boomerang Correction	195
5.5.1	Case 5.6. TBL, Boomerang/Transverse UBL, Abdominoplasty/LBL	196
5.5.2	Case 5.7 Boomerang/J-Torsoplasty, Abdominoplasty/Flank Excision	197
5.5.3	Case 5.8 Boomerang/J-Torsoplasty, Abdominoplasty/Flank Excision	205
5.5.4	Case 5.9 Boomerang/J-Torsoplasty, Abdominoplasty/Flank, Thick Scars	208
5.6	Summary	208
	References.....	211
6	Facelift in the Body Contouring Patient.....	213
6.1	Background	213
6.2	Vertical Facelift	214
6.2.1	Case 6.1 Vertical Facelift in a Thin-Weight-Loss Patient	215
6.3	Extended Vertical Facelift	220
6.3.1	Case 6.2 Extended Vertical in a Heavy-Weight-Loss Face	221
6.3.2	Case 6.3 Extended Vertical in a Thin-Weight-Loss Face	222
6.3.3	Case 6.4 Vertical Facelift with Sculpturing	225
6.4	Summary	225
	References.....	227
	Facelift References	227
	Index	229

List of Videos

- Video 3.1 Closure of back
- Video 4.1 Lipoabdominoplasty with oblique frank excision
- Video 4.2 Spiral thighplasty drawing
- Video 4.3 Spiral thighplasty operation
- Video 4.4 J-Torsoplasty
- Video 4.5 L-Brachioplasty
- Video 5.1 Boomerang drawing
- Video 5.2 Boomerang operation
- Video 6.1 Vertical facelift
- Video 6.2 Vertical facelift liposculpture

Comprehensive body contouring: Theory and Practice is an innovative plastic surgeon's analysis of the past 15 years of clinical experience. It is both an instructional manual and surgical atlas. By its very nature, body contouring surgery is comprehensive. It is characterized by extensive surgery of contiguous regions. Traditional teaching in aesthetic plastic surgery is by location such as breast, abdomen, arms, or thighs. Until recently, little to no attention was placed on neighboring anatomy and the impact of contiguous procedures. In the past and for some surgeons to this day, aesthetic operations are planned and executed individually for each area. This text will focus on the design, integration, and execution of individual operations to achieve optimal gender-specific results.

Regardless of the etiology of the deformity, body contouring surgery focuses on the removal of excess tissue followed by suspension and reshaping of the remaining skin. The recontouring has become more sophisticated through new patterns of excision, concomitant liposuction, lipoaugmentation, selective retention of tissues, and shaping with neighboring flaps. The sheer magnitude of deformity after massive weight loss imposed a global approach with multiple procedures. The severity of the deformities leads to the acceptance of extensive scars in exchange for satisfying contours. Nevertheless, techniques for minimizing scars are introduced throughout this compendium. A coordinated, well-planned

bold approach best preserves adequate excess tissue for recycling. The outcome is focused more on gender-specific features than how much tissue was removed or the length of the scars. The background and temperament of the broadly trained plastic surgeon makes him or her the best-prepared specialist to take on these challenges. The technical complexity, requisite artistry and patient interaction, and high rate of complications thwart encroachment from other specialties.

Over a decade ago, total body lift (TBL) surgery was conceived as the coordinated artistic surgical effort to correct complex and severe weight loss deformity of the entire torso in as few stages as safely possible. The initial experience was presented and published in multiple scientific forums (Hurwitz 2004), followed by an analysis of the first 75 cases (Hurwitz et al. 2008). There were 59 single-staged, 15 two-staged, and 1 three-staged TBL, having 605 separate procedures, for an average of 8.2 per patient. Patient satisfaction and analysis of photographic results demonstrated excellent reduction in deformity and comparable rates of complications regardless of staging. While 66 % minor complication rate per patient encounter was concerning, it distilled down to a reasonable 11 % per procedure. Since then, improvement in technique and technology has reduced the rate of complications.

While the underlying concepts of TBL surgery are unchanged, the reality is that the transformations are mostly performed today in

two to three integrated stages. With the abdominoplasty being the keystone procedure, the lower body, buttocks, and thighs are preferably corrected first. Although, there are many exceptions such as when the thighs are too heavy and need preliminary liposuction. At a second stage, the upper body, breast, and arms are approached along with any revisions needed from the first stage. The staging may be reversed due to patient preference or an oversized lower body. Body contouring surgery in the male, especially in the chest and waist, has unique challenges that relate to gender-specific musculoskeletal shape that is not well appreciated by female-centric plastic surgeons. After a dozen years experience, the single-stage TBL is limited for the treatment of ideal presentations by an organized team. As predicted in 2004, the male torso transformation appears to be best treated through a single-stage TBL. The occasional facial rejuvenation is often last, but may be done at any time. The extent of skin deformity treated by facelifts in the MWL patient presents special surgical challenges, which justifies its inclusion in this body contouring text. At the core is adroit handling of fat and a reproducibly secure SMAS and platysma suspension system with barbed sutures.

Comprehensive body contouring surgery reflects an emphasis on accentuating gender. Chapter 2 presents relevant gender-specific aesthetics and perioperative care. Chapter 3 details surgical principles and technique. Interrelated operations demand complex aesthetic analysis, fine technical skills, organized efficient teamwork, and attentive perioperative care. Chapter 4 is TBL surgery to shape a female. After a detailed presentation of the lower body lift, the two major variations of the upper body lift are discussed. Several deviations on the common theme are presented. Then there are Mommy Makeover cases. Chapter 5 is treatment of the muscular male. First, there are cases on gynecomastia, and then skin tightening for the entire torso is presented. Chapter 6 details the efficient and effective facelift surgery after MWL in the presentation of both full and deflated faces.

Once the aesthetics, principles, basic techniques, and care are explained, comprehensive

body contouring is conveyed through complex case presentations. The advantage of this single-author book is efficiency and consistency in presentation. The goal is to teach a uniform approach to sophisticated plastic surgeons. Brief case presentations are included to make a few points. Selected cases are fully presented and are picked for their representative and illustrative value. Relevant criticism and contrary published views are presented. Plastic surgeons are highly visual. So much so that when clinical photographs and artistic drawings do not envisage a compelling story, the reader surgeon dismisses the text. Busy surgeons ignore poorly illustrated text. Some years ago, Pat Maxwell, renowned Nashville plastic surgeon, profoundly commented that he was very impressed with my article on Spiral Flap reshaping of the breasts. He liked the images and planned to read the text later. The inclusion of video of operations provides innumerable views as well as motion. That is as close as one can get to present three-dimensional sculpturing of patients.

There is a consistent pattern of photography presentation. Cases that demonstrate technique through images and/or video start with a series of photos without surgical markings for the reader surgeon to examine the deformity and consider treatment options. For most cases, four full-body unclothed views are shown: frontal, right oblique, right lateral, and right posterior oblique. The next set of photos is the preoperative views with surgical markings alongside to the latest postoperative views. In that way, the planned surgery can be compared to the final result, realizing at times the intraoperative incisions may be adjusted slightly. While interesting, it may be difficult to interpret the results older than several years because of intervening weight change, pregnancy, and aging. In demonstrative cases, intraoperative photos and/or videos illustrate the technique, followed by an early postoperative result, which reveals what was actually accomplished on the operating room table. To appreciate the evolution of the correction, intermediate results of several months are shown to be compared to the “final” result. Thanks to the generosity of publisher Springer-Verlag, this picture book along with companion

videos is the author's best attempt, outside of the operating room, to teach body contouring surgery.

The result photographs are the surgeon's severest critic and can be humbling, particularly when several operations are intertwined. Scars can be widened and unsightly. Asymmetries may have been ignored or exaggerated. Lifts may not heal symmetrically. Laxity may partially recur and desired contours lost. A critique is provided for obvious deficiencies but the reader is the judge. Shortcomings are usually the result of technical error and not fundamental to the technique. Both novice and skilled plastic surgeons will learn.

Some patients desiring body contouring have a problem managing their weight. Their plastic surgeon has a responsibility to guide the patient to healthy eating, reduce excess weight, and provide supplements for improved nutrition. If a patient is unable to lose enough weight to be a reasonable surgical candidate, we provide one or two sessions of a 6-week course of a daily HCG injection with 500 cal diet that routinely reduces their weight by 20 % without adverse effects. Eighty percent of our patients lose significant preoperative weight under this stringent diet.

When representing "established" procedures, emphasis is on long-term results. The introduction of modifications is probably more value for the sophisticated reader, but the results shown may only be months old rather than years. Reliable recent and established refinements associated with the author to be presented in detail include:

1. HCG/500 cal a day diet for selected overweight patients
2. Artistic fat retention, removal, augmentation, and flap transposition for curves
3. Central high-tension abdominoplasty with deepithelialized three-flap umbilicoplasty for improved contour
4. Picture frame pubic monsplasty
5. Transverse excision UBL without a posterior midline scar
6. J-torsoplasty UBL for scarless back
7. Reshaping of the female breast with a J-torsoplasty flap

8. Reducing axilla with posterior arm advancement flap of the L-brachioplasty
9. Avoidance of Z-plasty in brachioplasty
10. Boomerang pattern correction of gynecomastia with J-torsoplasty for tight skin of the chest
11. Boomerang with J-torsoplasty and abdominoplasty extended with oblique excisions of the flanks for tight skin across the entire torso
12. Spiral thighplasty to improve reshape the lower buttocks, define the medial inferior buttock fold, and tighten the posterior thigh
13. Supine then prone LBL thighplasty combination low-lying lower body lifts may drift inferiorly with partial recurrences of sagging thighs
14. Two-layer barbed suture rapid and secure closure
15. Barbed suture vertical imbrication SMAS facelift
16. Artistic adipose management in facelift
17. VASERlipo and augmentation for primary figure faults and correction of secondary deformity

The objectives through didactic discussion and multiple detailed clinical presentations follow:

1. Recognize applied surgical art of body contouring surgery
2. Learn the basic principles of evaluation, preparation, care, organization, and surgical technique
3. Understand and implement gender-specific surgery

Learn surgical techniques and body contouring integration and coordination of L-brachioplasty, transverse upper body lift, J-torsoplasty, Spiral flap breast reshaping, lipoabdominoplasty with central high tension, L-thighplasty and Spiral thighplasty with and without vertical extension, and boomerang correction of gynecomastia with and without J-torsoplasty and combined with extended abdominoplasty.