Melvin A. Shiffman
Alberto Di Giuseppe
Editors

Advanced Aesthetic Rhinoplasty

Art, Science, and New Clinical Techniques

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Advanced Aesthetic Rhinoplasty

This book is dedicated to the memory of Dr. Antonella Belligolli M.D., Plastic Surgeon, aged 48, who died after a long struggle with breast cancer, which affected her 15 year back.

She was part of the staff of the Department of Plastic and Reconstructive Surgery of the University of Ancona, since its foundation.

She worked since 1991 in the Ancona General Regional Hospital, and she was a prominent Breast Plastic Surgeon.

But mostly, she was a real doctor: she came to learn plastic surgery, but finally she taught and showed us how a doctor should be.

Honesty, humanity, tenderness and firmness were her principles, which she applied to her life and her work.

We had the great privilege to work closely with her, and to learn from her.

To her dear husband Massimo, to her lovely daughter Ilaria and to her son Pietro, the tough job of continuing their lives, inspired by the great heart of this splendid woman.

Ciao Antonella

Alberto, Giovanni, Alessandro, Antonello, Marina, and all the Medical and Paramedical Staff of the Plastic Surgery Department 1991–2012

Foreword

Head Professor of the Post-Graduate Courses in Plastic Surgery of the Pontifical Catholic University of Rio de Janeiro and the Carlos Chagas Post-Graduate Medical Institute. Visiting professor, I.S.A.P.S.

For many years, I have been involved in the teaching of plastic surgery, having trained many generations of young surgeons eager to learn the practice of our specialty. Among the diverse anatomical regions that fall under our care, I believe the nose presents – even to the experienced surgeon – one of our greatest challenges. Placed in the fulcrum of the face, this complex structure commands our full attention. A slight defect, a minimal asymmetry, and harmony is unbalanced. The nasal pyramid must be approached with a perfect understanding of anatomy and function, through many different options of tissue manipulation, with an aesthetic result that is pleasing and in equilibrium with the patient's physiognomy. To operate a primary case, and especially a secondary nose, requires our utmost skill. The editors of this book have excelled in bringing together a large team of experts in the art and science of rhinoplasty. All aspects of this fascinating area of plastic surgery are covered, starting with the fundamental principles, moving on to the clinical evaluation and planning, and including a rich description of surgical techniques, elaborated by authors of large practice. Novel concepts and nonsurgical approaches are introduced, expanding the scope of a traditional textbook on rhinoplasty. I congratulate Dr. Shiffman and his collaborators for this important book, as it will prove to be a valuable contribution to the literature of plastic surgery.

Rio de Janeiro, Brazil — Ivo Pitanguy

Preface

There are many books on rhinoplasty, but most are limited to the editor's techniques or those of a few contributors. These give restricted information on the variety of procedures that are available and are mainly for teaching the inexperienced and somewhat experienced surgeons how to do rhinoplasty and possibly stay out of trouble.

This book on Advanced Aesthetic Rhinoplasty: Art, Science, and New Clinical Techniques gives a detailed analysis of the newer techniques that are available in primary and secondary rhinoplasty. This allows the presentation by international experts of the very newest procedures available with subjects covering nasal anatomy, psychological aspects of rhinoplasty, surgical techniques of primary rhinoplasty and secondary rhinoplasty, the use of fillers in rhinoplasty, and the possible risks and complications of rhinoplasty. This concept of gathering new techniques from international experts is not present in any other book on rhinoplasty, and the information is extensive and quite different from even recent books on rhinoplasty. The book is for the inexperienced, experienced, and the very experienced surgeon doing rhinoplasties.

The editors wish to present advanced technology and clinical techniques in rhinoplasty from unique contributors experienced with these procedures that are modified or original procedures. The contributors are inventive and eloquent in presenting to the reader a way to progress from inexperienced or experienced surgeons in rhinoplasty to better understanding that there is more than following simplified techniques as a template to performing a procedure that is fraught with possible risks and complications. Understanding the patient through psychological profiling will make it easier for the surgeon to stay out of trouble with patients who are not really candidates for rhinoplasty.

All cosmetic surgeries are potential problems if the patient is not properly evaluated preoperatively, not only physically but also mentally. This is most true with the patient considering rhinoplasty. However, the satisfaction of the patient who has a good result is inestimable.

Tustin, CA, USA — Melvin A. Shiffman, M.D., J.D.

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Part IV Primary Rhinoplasty

Part I

Anatomy

Muscles, SMAS, and Vascular Anatomy of the Nose

1

Yves Saban, Chiara Andretto Amodeo, and Roberto Polselli

1.1 Nasal Muscles and Concept of Nasal SMAS

Multiple layers form the soft tissues overlying the nasal bony and cartilaginous framework: skin, subcutaneous fat tissue, fibromuscular, deep areolar, and perichondral/periosteal layers.

The fibromuscular layer can be described following three different approaches: anatomical, physiological, and surgical.

1.1.1 Classical Descriptive Anatomy of Nasal Muscles

Classic anatomy treatises [1] describe several constant nasal muscles, even if some variations can be present, especially in the tip area and over the lateral wall of the bony pyramid (Figs. 1.1 and 1.2) (Table 1.1):

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1. The procerus (Figs. 1.1 and 1.3) covers the nasion lying between the frontalis muscle cephalically to aponeurosis of the transversus nasalis muscle caudally. In some cases, it can be considered as a muscular link between the frontalis muscle and the nose. It gets adherences to the periosteum of the nasal bones and to the perichondrium of ULC, close to the midline of the dorsum.
2. The transversus nasalis (Figs. 1.1 and 1.4) is adherent on the midline over ULC, forming a common aponeurosis which is part of both symmetric muscles. They are composed by two expansions: the caudal one inserts onto the deep aspect of the skin, and the cranial one intermingles with the lateral part of the myrtiformis muscle, covered by levator labii alaeque nasi.
3. The levator labii superioris alaeque nasi (Figs. 1.1 and 1.4) inserts on the frontal process of the maxilla and splits into two chiefs: one goes to the philtrum of the upper lip, the other one to the ala of the LLC.
4. The dilator naris (Fig. 1.1) forms the lateral framework of the nostril. It is located between LLC, nostrils margin, and pyriform aperture in an anatomic area absolutely free of any cartilage. It has also been sometimes described as part of the levator labii superioris muscle, so forming the deep levator labii superioris.
5. The compressor naris major and minor (Fig. 1.1) are accessory and inconstant muscles which lay in the subcutaneous tissue over the tip area; especially when LLC lateral crura are concave, these muscles are located in the

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