Melvin A. Shiffman (Editor)

Mastopexy and Breast Reduction
Mastopexy and Breast Reduction

Principles and Practice

Springer
The Breast: The center of emotional attraction, the source of nourishment, and means of seduction are some of the many possible definitions of this precious feminine attribute. Since ancient times, the female breast has had an important role for women and society in general. It is up to art to glorify it and it is the artist’s job to find an ideal shape for it. Works of art survive as testimony to the evolution and transformation of the breast. Since prehistoric times, the cult of the Great Mother has settled in this place. The breast thus becomes the focus of the renewal of life and its cycles. It is the symbol of fertility and abundance and symbolizes life’s renewal. The breast then is the center of the magical, wonderful forces that rule the world. The numerous statuettes typically with ample bosoms and emphasizing sexual organs testify to the powerful role that women played in the Egyptian, Minoan, Syrian, and Mesopotamian cultures. When the masculine element prevailed over the feminine, the breast became the creative principle of the universe. The Great Mother became the wife or the daughter. The breast was no longer a magical place. The statuettes were certainly feminine but they were not known for their beauty. Images of a marked yet less powerful sensuality were created instead.

From the Great Mother to Isis to Juno and finally to the cult of the Christian Virgin Mary, the breast is the quality of the feminine. In art, the breast becomes a true obsession. Greek art with its soft breasted Venuses started this trend. Each historic period and each artist has given its/his own interpretation of the attribute: ephebic for Memling and Piero di Cosimo, asexual for Botticelli, solemn and porcelain-like for Cranach, appetizing and well-shaped Giorgione and Titian’s Venuses of the sixteenth century that finally indulge in pleasure. They established the trend of the alluring sensual girls who give themselves. The breast is opulent in the seventeenth century, unconventional for Fragonard, uninhibited for Goya, and offered in Manet.

The shape changes, the meaning changes. The shape is not only the manifestation of the age but also of moral qualities. The matter changes, perception changes. What remains unchanged today is the centrality of this precious attribute. It is now deprived of its old symbolic meanings, yet it is still an element of great charm, power, and seduction. In our time, there is indifference towards its history and origins. There seems to be no interest in recreating the sacred relationship between breast and magical powers: only the seductive and sexual qualities remain. We are surrounded by images of curvy women building their success around their generous breasts. What used to be creation is now aggressiveness.

The objective of plastic surgery is to reconstruct a peaceful relationship between the feminine and its external shape and to reestablish body harmony. Although even today plastic surgery is not regarded as having any artistic value, it would be advisable to start thinking about its objectives. Unlike sculpture or painting, surgery does not deal with amorphous matter but with live matter. Wood or marble grain is replaced by tissues, capillaries, muscles, and flesh. Live matter is in constant transformation. As the artist fixes his unstable desire forever in a permanent shape, in the same way the contemporary surgeon moulds the flesh to satisfy women’s wishes. The breast is once again the center of the feminine. Surgery, like a work of art, must follow the principles of harmony. Their instruments are the same: proportion, harmony, symmetry, and shape. The artist-surgeon has to understand the body in which a shape will be created. He creates his own sculpture: the breast as a work of art on a living body. Woman as a live sculpture representing art in progress is live art.

Giorgio Fischer
Beautifying the breast with mastopexy, and/or breast reduction are some of the goals of the aesthetic surgeon to bring a better quality of life to the female (and sometimes the male) patient. Women desire to be more attractive by having breasts that meet their own expectations. What makes the aspects of the breast attractive can be driven by the female body as portrayed in magazines, posters, advertisements, movies, and videos as well as the male's attitude toward buxom women and women dressing in clothes that exaggerate the breast fullness. The surgeon performing mastopexy and/or breast reduction must understand the patients' driving force to change the shape or contours of their breasts. At the same time the patients' desires and expectations should be evaluated.

Surgical procedures in mastopexy and breast reduction are constantly changing with hopes of improving the results. The patients are looking for less scars, if possible, and safety in performance of the surgery. Breast reduction is the only aesthetic procedure of the breast (if one can call this an aesthetic procedure rather than correction of a medical problem) where patients are mainly satisfied with the reduction in volume that relieves their pain and discomfort and allows them to find clothes that fit properly without having to seek specially made sizes. These patients usually do not care about the scars. However, as aesthetic surgeons we try to reduce the scars in all patients if possible.

This book is an attempt to bring to the student, novice, and experienced breast surgeon as many of the various techniques as possible that are available in mastopexy and breast reduction including old, new, and modifications of the surgical procedures. There is a discussion of the procedures with indications, technical aspects, and possible complications. The anatomy of the breast, history of mastopexy and breast reduction, principles of mastopexy and breast reduction, preoperative care, postoperative care, avoidance and treatment of complications, and medical legal aspects are discussed.

The contributors have been carefully selected from international experts to bring to the reader a variety of ideas, new and old. It is hoped that the reader will begin to appreciate the magnitude of information that is available that will help in deciding the type of surgery that can be used in correcting the problems of ptosis, macromastia, gigantomastia, and breast asymmetries.

USA, 2009

Melvin A. Shiffman
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Part I
Breast Anatomy
Chapter 1

Mammary Anatomy

Michael R. Davis

1.1 Introduction

A thorough understanding of breast development and anatomy is a requirement for modern plastic surgeons. Advanced techniques of reduction mammoplasty, mastopexy, augmentation, and reconstruction demand comprehensive knowledge of the now detailed descriptions of breast architecture. As a complicated physiologic and esthetic structure, the form and function of the breast weighs heavily on a woman’s psyche. Significant improvements or complications can impact greatly on self image for better or worse. Optimizing results and avoidance of complications take root in the knowledge of breast anatomy. Only then can a plastic surgeon engage his full creativity in sculpting the breast form.

1.2 Development

As a cutaneous appendage, the breast takes its origin from the ectoderm. The breast bud begins differentiation during weeks 8–10 along the milk ridge. The normal human breast develops over the fourth intercostal space of the anterolateral chest wall (Fig. 1.1). Supernumerary nipples and breasts can occur anywhere along the milk ridge from the axilla to the groin. Statistically they are most common near the left inframammary crease.

Following a brief period of activity shortly after birth in response to maternal hormones, breast development becomes dormant until the onset of puberty. Pubertal onset is becoming ever earlier in modern society, but currently occurs at approximately 9 years of age. Typically, by the age of 14, parenchymal growth has extended to its mature borders. These include the sternum medially, the anterior border of the latissimus dorsi laterally, the clavicle superiorly, and the inframammary crease inferiorly. These represent approximate anatomic landmarks that are not rigidly defined borders. Breast tissue can extend across the midline and beyond the inframammary crease. An extension of breast tissue normally penetrates the axillary fascia into the axillary fat pad and is termed the “Tail of Spence.” Mature breast morphology projects off the chest wall in a conical fashion with its apex deep to the nipple–areola complex.

Development of overall breast shape is multifactorial. Breast form is dependent on fat content and location, muscular and skeletal chest wall contour, and skin quality. These structures display complex attachments and interactions to result in the final form. Breast shape and size is unique to each individual and is determined largely by heredity.

1.3 Parenchyma

Embedded within the fibrofatty stroma lies the glandular portion of the breast. Glandular structure consists of millions of lobules clustered to comprise approximately 20–25 lobes. Interlobular ducts come together to form approximately 20 main lactiferous ducts. Lactiferous sinuses collect milk, and specialized ducts within the nipple transmit milk to the surface (Fig. 1.2). Glandular size remains relatively constant from individual to individual. The bulk of the breast consists of fat. Subcutaneous fat as well as interlobular fat content determines texture, contour, and density.

The breast parenchyma is encompassed and supported by an intricate fascial system. The superficial fascial system is variable and sometimes indistinct from the overlying dermis anteriorly. Fat content of the subcutaneous tissue between the dermis and superficial fascia determines the clarity of these structures. Continuous with the superficial fascia is a deep component which separates the parenchyma from the pectoral fascia as well as fascia overlying adjacent muscles. Interposed between the superficial and deep components of the superficial fascial system are fascial extensions termed Cooper’s ligaments. Anchored to the muscular fascia, these ligaments act to suspend the parenchyma. Attenuation of these tissues is largely responsible for ptosis.