Breast Ptosis

Mastopexy by the triple flaps procedure

Thesis

Submitted by

Dr. Ramy Magdy Makkar

In the partial fulfillment of M.D. Degree in General Surgery

Under supervision of

Prof. Dr. Alaa Gheita
Professor of plastic and general surgery
Faculty of medicine, Cairo University

Prof. Dr. Aly Moftah Aziz Moftah
Professor of plastic and general surgery
Faculty of medicine, Cairo University

Ass. Prof. Dr. Wael Mohamed El Shaer
Assistant Professor of plastic and general surgery
Faculty of medicine, Banisweif University

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List of Abbreviations

BBW	*Breast Base Width*
cm	*centimeter*
CN	*Midclavicular Point to Nipple*
ICAP	*Intercostals artery perforator*
IMF	*Infra Mammary Fold*
MWL	*Massive weight loss*
NAC	*Nipple Areola Complex*
NIMF	*Nipple to Infra Mammary Fold*
NMR	*Nuclear magmetic resonance*
SFS	*Superficial Fascial System*
SNN	*Suprasternal Notch to Nipple*
TGF	*Transforming Growth Factor*

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Part 1
Introduction

Introduction

The emphasis on women's appearance is an ancient, yet ongoing, cultural story" *(Oliver, 1999)*. Breast in females came to fame from ancient life as one of the pillar features of femininity and is considered by many as the best expression of femininity thus giving breast cosmetic surgery a privilege position. *(Tepavicharova-Romanska and Romanski, 2004)*

While breast hypertrophy could be attractive, breast ptosis is unattractive and in the mind is primarily associated to the ageing process. Women lose skin elasticity in their breasts, gravity takes its toll, and the breasts begin to sag. When shape and firmness of the breasts change, some women become unhappy with their appearance and wish to return to their more youthful look. In these cases a breast lift or mastopexy can reduce or eliminate sagging, and, for women seeking enhancement in size, can be performed in conjunction with implants to increase the breasts volume. *(Brink, 2000)*

Mastopexy presents one of the greatest challenges to the breast surgeon *(Pinsky, 2005)*. Numerous techniques provide improvement in the shape of the breast. Although breast implants can provide the upper pole projection patients often desire, they present specific risks and complications and does not solve always all the problems. Mastopexy and augmentation together can be a very difficult combination of procedures to perform. In many cases, the position of the implant can be inappropriate, necessitating reoperation. *(Persoff, 2003)*

The choice of the suitable surgical technique, to correct that deformity, will depend on the amount of glandular tissue remaining in the breast. Elevation and augmentation give the breast a pleasant contour and an attractive look. To attain that goal many options includes augmentation mammaplasty (prosthesis) *(Ohana et al., 2005)*, mastopexy or a combined procedure. *(Rohrich et al., 2004)*

A new technique, the triple flaps procedure, for breast ptosis with little glandular tissue and instead of resorting to breast prosthesis and suitable for asymmetric conditions was considered a reliable and safe procedure and gave us satisfactory results.

Aim of the work

1. To review the literature concerning different surgical modalities for breast ptosis as well as studying the vascular supply of the breast.

2. To discuss a new technique “the triple flaps mastopexy” concerning the aesthetic outcome of the breast and other advantages over the different approaches for breast ptosis.

Part 2
Review of literature

1 Breast embryology, development and physiology

Comprehension of embryologic development is essential to fully appreciate the character of the breast and to profoundly understand the nature of it.
The anatomical description of the breast shows it to be the only organ not fully developed at birth *(Lawrence R. A. and Lawrence, 2005).* Breast development is usually completed 1 to 2 years after the onset of ovulatory cycles.
The breast changes in size, shape and function prior to birth, through puberty, pregnancy, and during and after lactation *(Harris et al., 2000).*
Breast development involves two distinct processes:

- Organogenesis (ductile and lobular growth) and
- Lactogenesis (milk production).

Prior to birth the development of the breast is essentially the development of skin and subcutaneous tissue on a particular anatomic site. Germs that give rise to infundibulo folliculo sebaceous- apocrine units are present throughout the skin of the breast and they are very similar to the germs that give rise to the infundibulo sebaceous-apocrine unit of the nipple. Both of those germs are very different from germs that eventuate in eccrine units. Because there are no true hair follicles on the nipple, the units there are rightly termed infundibulo sebaceous-apocrine ones.
Development of the skin and subcutaneous fat is a continuous process that is repeatable, more or less, on all anatomic sites. *(Ackerman et al., 2007)*

The subcutaneous fat takes on its own character, but at a slower pace. After the 24th week, fat cells (adipocytes, lipocytes) develop from primitive mesenchymal cells situated beneath the dermis. *(Ackerman et al., 2007)* During the course of this transformation, fibrous septa that house large blood vessels and nerves emerge and lobules of the panniculus adiposa are created by virtue of the intersection of struts of fibrous tissue.
From the fifth to seventh week of the pregnancy the fetus develops a mammary ridge, which rises from the axilla to the inguinal region *(Latham et al., 2006)*. By about the sixth gestational week, the ridge becomes depressed into the pectoral region, forming the primary breast buds *(Einav-Bachar et al., 2004)*.