

Immediate Post Mastectomy Breast Reconstruction

An Essay

*Submitted for Partial Fulfillment of Master Degree
in General Surgery*

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2016

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

لَسْبَدَانِكَ لَا نَعْلَمُ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

صدقة الله العظيم

سورة البقرة الآية: ٣٢



وَأَنْزَلَ اللَّهُ عَلَيْكَ
الْكِتَابَ وَالْحِكْمَةَ
وَعَلَّمَكَ مَا لَمْ تَكُنْ
تَعْلَمُ وَكَانَ فَضْلُ
اللَّهِ عَلَيْكَ عَظِيمًا

صدق الله العظيم □

□ سورة النساء الآية (١١٣)



Acknowledgments

*First and foremost, I feel always indebted to **Allah**, The Most Kind and Most Merciful.*

*I'd like to express my respectful thanks and profound gratitude to **Prof. Dr. Alaa Eldin Abdallah Farag**, Professor of General Surgery, Faculty of Medicine - Ain Shams University, for his guidance, kind supervision, valuable advice, and continuous encouragement, which made possible the completion of this work. I really have the honor to complete this work under his supervision.*

*I am also delighted to express my deepest gratitude and thanks to **Dr. Ahmad Fathy Ali Elsherif**, Assistant Professor of Plastic Surgery, Faculty of Medicine - Ain Shams University, for his kind care, continuous supervision, valuable help and great assistance throughout this work.*

*I would like also to extend my thanks to **Dr. Mohamed Abo-El Nagga**, Lecturer of General Surgery, Faculty of Medicine - Ain Shams University, for the efforts and time he has devoted to accomplish this work.*

*I would like to express my hearty thanks to all my **Family** for their support till this work was completed.*

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List of Abbreviations

<i>Abbr.</i>	<i>Full-term</i>
APBI	: Accelerated partial breast irradiation
CIS	: Carcinoma in situ
DCIS	: Ductal carcinoma in situ
DIEP	: Deep inferior epigastric artery perforator
ELIOT	: Electron Intra Operative Therapy
IDC	: Invasive duct carcinoma
IGAP	: Inferior gluteal artery perforator
ILC	: Invasive lobular carcinoma
IMA	: Internal mammary artery
IMV	: Internal mammary vein
LCIS	: Lobular carcinoma in situ
LDF	: Latissimus Dorsi Flap
SGAP	: Superior gluteal artery perforator
SIEA	: Superficial inferior epigastric artery
TDAP	: Thoracodorsal artery perforator
TRAM	: Transverse rectus abdominis myo-cutaneous flap
VRAM	: Vertical rectus abdominis musculocutaneous flap

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Abstract

Background: Breast cancer is the most commonly diagnosed malignancy amongst women, with an incidence rate more than twice that of colorectal cancer and cervical cancer, and about three times more than lung cancer. Fortunately, breast cancer mortality worldwide is about 25% greater than that of lung cancer in women. **Aim of the work:** This essay is made to spotlight the new modalities and concepts of immediate breast reconstruction following Modified Radical mastectomy to regain a satisfactory body image. **Conclusion:** Although autogenous tissue techniques give the best aesthetic and most natural results, they are a more significant surgical undertaking. It should be appreciated that recent innovations in expander and implant design have made the results of prosthetic reconstruction more predictable.

Key words: breast cancer, malignancy, cervical cancer, mortality, lung cancer, breast reconstruction, mastectomy.

Introduction

The breast is an image of femininity. It plays an important role in the woman's life functionally, and psychologically. Those with breast deformities often experience loss of self confidence that may affect their everyday life and may lead to adverse consequences including anxiety, depression and change in body image (*Roth and Lowery, 2005*).

Breast cancer is the most commonly diagnosed malignancy amongst women, with an incidence rate more than twice that of colorectal cancer and cervical cancer, and about three times more than lung cancer. Fortunately breast cancer mortality worldwide is about 25% greater than that of lung cancer in women (*Abeloff et al., 2004*).

Breast reconstruction initially was created to reduce complications of mastectomy and to diminish chest wall deformities. It is known that reconstruction also can improve psychosocial well-being and quality of life of patients who have breast cancer. The primary goal of breast reconstruction is to recreate form and symmetry by correcting the anatomic defect while preserving patient safety and image (*Hu et al., 2007*).

Breast reconstruction following Modified Radical Mastectomy can be carried out either immediately or as a delayed procedure. Immediate reconstruction is carried out at

the same time of surgery while delayed may be performed at any time following mastectomy (*Wiley and Sons, 2011*).

Immediate reconstruction reduces the need for multiple operations, the cost, lessening psychological morbidity and, improving body image (*Greenall, 2007*).

The primary reconstructive options (immediate breast reconstruction) involve the use of an implant (usually with an expander), patient's own tissue (autogenous tissue reconstruction), or both (*Hu et al., 2007*).

Breast reconstruction by tissue flap procedures uses tissues from the back, abdomen, thigh or buttocks to rebuild the breast. In pedicled flaps skin, muscle and fat are moved from the abdomen (TRAM-transverse rectus abdominis myocutaneous flap) or from the back (Latissimus Dorsi flap) to the chest by tunneling it under the skin so that blood supply to the muscle does not need to be cut. Free flap microsurgical procedures use perforator flaps – skin and fat with attached vein and artery, but without any muscle, a good example is (DIEP) Deep Inferior Epigastric Artery Flap when it is taken from the lower abdominal area (*Djohan, 2008*).

In 1984, Becker described a dual-chamber expander that had a silicone gel outer lumen with an inflatable inner saline lumen. This pioneered a single-stage, predictable way of rapidly achieving a breast reconstruction (*Theodore et al., 2004*).

Prosthetic breast reconstruction requires a well preserved pectoralis muscle in order to create a wide sub muscular pocket in which the prosthesis will be inserted. The implant is placed in a submuscular position superiorly covered by the pectoralis major muscle. In the lower part of the breast the pocket is dissected undermining all of the adipo-fascial tissues overlying the anterior serratus muscle (*Salgaello and Farallo, 2005*).

However, Subpectoral device placement has been criticized for inadequate control of the lower pole. One innovation has been the insertion of Alloderm along the inferior border of the pectoralis major muscle. This provides a secure attachment of that muscle inferolaterally without the need for total sub-muscular pocket dissection. The Alloderm graft creates a secure pocket, defines the inframammary fold, and provides an additional layer of coverage for the device. After completion of expansion, expanders are exchanged to permanent implants (*Spear et al., 2010*).

Wilkins et al. (2006) stated that women affected by breast cancer consider more important the timing of breast reconstruction (better if immediate) than delayed suggesting that immediate breast reconstruction may be the first option in order to avoid the feeling of long-lasting mutilation.