

Evaluation of Early vs Late Latissimus Dorsi Flap Reconstruction for Breast Cancer Patients in Egypt

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم الحكيم

صدق الله العظيم

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List of Contents

Title	Page No.
List of Tables	i
List of Figures	ii
List of Abbreviations	viii
Introduction	1
Aim of the Study	14
Review of Literature	
☞ Anatomy	15
☞ Pathology of Breast Cancer.....	45
☞ Surgical Management of Breast Cancer	60
☞ Breast Reconstruction with the Latissimus Dorsi Myocutaneous Flap	92
Methodology	118
Results	124
Discussion	131
Summary	139
Conclusion and Recommendations	142
References	143
Arabic Summary	

List of Tables

Table No.	Title	Page No.
Table (1):	Staging of breast carcinoma	55
Table (2):	Anatomic Stage/Prognostic Groups.....	58
Table (3):	Distribution of patients according their age and medical history	124
Table (4):	Distribution of patients according the treatment of their cancer	125
Table (5):	Distribution of patient's clinical characteristics according to the timing of reconstruction.....	127
Table (6):	Distribution of patient's post-operative outcomes according to the timing of reconstruction	128

List of Figures

Fig. No.	Title	Page No.
Figure (1):	Showing the embryological stages of development of the breast parenchyma.....	16
Figure (2):	Milk lines are a line of ectodermal thickening extending from the axilla to the groin	17
Figure (3):	The process of formation the lactiferous ducts .	18
Figure (4):	An illustration of the myotomes from which the skeletal muscles arise.....	19
Figure (5):	Topography of the female breast with its underlying muscles.....	21
Figure (6):	Boundaries of the base of the breast	22
Figure (7):	Anatomy of the nipple and areola (left) and histological cross section of the nipple (right)...	23
Figure (8):	The breast parenchyma composed of breast lobules and lactiferous ducts.....	24
Figure (9):	The fascial covering of the breast as the Scarpa's fascia splitting to envelop the breast creating the anterior and posterior lamella and between them the Cooper's ligaments supporting the breast.....	25
Figure (10):	The breast parenchyma in a lactating and non lactating breasts with the underlying deep fascia surrounding the muscles.....	27
Figure (11):	The structures of the axilla, a pyramidal shaped space lateral to the breast	28
Figure (12):	Contents of the axilla, most notably the vascular and nervous structures within it.....	29

List of Figures (Cont...)

Fig. No.	Title	Page No.
Figure (13):	Live image of the axilla demonstrating the structures typically encountered during an axillary lymph node dissection.	29
Figure (14):	Innervation of the breast	30
Figure (15):	Sources of nervous supply of the breast	31
Figure (16):	Arterial blood supply of the breast	32
Figure (17):	Cross Sectional representation of the sources of arterial blood supply of the breast.	33
Figure (18):	Regional distribution of the arterial blood supply of the breast.	34
Figure (19):	Venous supply and arterial supply of the breast.....	36
Figure (20):	Venous drainage pathway of the breast.....	37
Figure (21):	Lymphatic drainage pathway of the breast.....	39
Figure (22):	Lymph node groups draining the breast.	40
Figure (23):	Levels of axillary lymph nodes.	41
Figure (24):	Surface markings of the Latissimus Dorsi muscle.....	42
Figure (25):	Arterial supply of latissimus Dorsi muscle mainly through the thoracodorsal artery.....	43
Figure (26):	The structures of the axilla	44
Figure (27):	Variation in the elliptical skin incision for mastectomy	65
Figure (28):	Raising upper skin flap for mastectomy in the correct plane up to clavicle	67
Figure (29):	Proper elevation of upper and lower flaps.	68

List of Figures (Cont...)

Fig. No.	Title	Page No.
Figure (30):	Dissection of the breast tissue from the pectoralis muscle and covering clavipectoral fascia.....	69
Figure (31):	Access to axilla lateral of the lateral border of pectoralis major.....	70
Figure (32):	Identification of the axillary vein.....	71
Figure (33):	The various anatomical landmarks of the axilla.	72
Figure (34):	Showing skin marking for a parallelogram lumpectomy.....	76
Figure (35):	Excised tissue with ink markings during a parallelogram lumpectomy.....	77
Figure (36):	Diagrammatic drawing of the defect left by a lumpectomy (A) and the subsequent closure (B,C)	77
Figure (37):	Batwing lumpectomy	78
Figure (38):	Final closure of batwing lumpectomy.	79
Figure (39):	Central segmentectomy or central quadrantectomy for centrally located lesions....	80
Figure (40):	Skin markings and incisions for reduction mammoplasty lumpectomy.....	82
Figure (41):	Note that the lesion is located in the inferior hemisphere of the breast.....	83
Figure (42):	Closure after reduction mammoplasty.	84
Figure (43):	Reduction mammoplasty or mastopexy is one of the most effective techniques for inferiorly located tumours.....	85

List of Figures (Cont...)

Fig. No.	Title	Page No.
Figure (44):	Diagrammatic images showing steps for reduction mammoplasty.....	86
Figure (45):	Diagrammatic images of LD myocutaneous flap.....	87
Figure (46):	Diagrammatic images of (a) pedicled TRAM flap, (b) Free TRAM flap, © Free DIEP flap.....	88
Figure (47):	Vascular anatomy of TRAM and DIEP flaps.....	88
Figure (48):	Live image of Lipofilling and lipomodelling technique for breast reconstruction.....	90
Figure (49):	Diagrammatic images of lipomodelling technique	90
Figure (50):	Early post-operative image of expander based breast reconstruction for future placement of prosthesis.....	91
Figure (51):	Drawing of the TRAM flap for volume replacement of contralateral breast	94
Figure (52):	Anatomical details of TRAM and DIEP flaps. ..	95
Figure (53):	Skin markings on the flap to be harvested.....	97
Figure (54):	The variation of orientation of the skin island over the LD muscle.....	98
Figure (55):	Showing the correct positioning for LD flap harvesting.....	101
Figure (56):	Incision and raising flaps over the LD muscle	101
Figure (57):	Creation of axillary tunnel and freeing the LD muscle from its attachments.....	102
Figure (58):	Passage of the LD myocutaneous flap through the axillary tunnel.....	103

List of Figures (Cont...)

Fig. No.	Title	Page No.
Figure (59):	The LD myocutaneous flap passed through the axillary tunnel and into the mastectomy defect.....	105
Figure (60):	Partial mastectomy defect covered by the LD myocutaneous flap	106
Figure (61):	Final closure of mastectomy covered by the LD myocutaneous flap	107
Figure (62):	Postoperative shape of LD myocutaneous flap reconstruction after conservative mastectomy	108
Figure (63):	Postoperative shape of bilateral LD myocutaneous flap reconstruction with silicone implant	109
Figure (64):	Partial flap necrosis and dehiscence	110
Figure (65):	Donor site seroma	110
Figure (66):	Showing pre-operative and post-operative photographs for delayed reconstruction after partial mastectomy.....	113
Figure (67):	Showing the difference in irradiation fields between reconstructed breasts and flat non reconstructed chest wall.....	115
Figure (68):	Study setting in Nasser institute for Research and Treatment and Ain Shams University Surgery hospital “Demerdash”.	118
Figure (69):	Operative images of a patient who underwent Late LD flap reconstruction after MRM.....	121
Figure (70):	Early postoperative image of a patient who underwent immediate LD flap reconstruction after CBS.	122

List of Figures (Cont...)

Fig. No.	Title	Page No.
Figure (71):	Distribution of patients according the type of operation.	126
Figure (72):	Distribution of postoperative cosmetic satisfaction by type of reconstruction.	129
Figure (73):	Distribution of postoperative complications following each type of reconstruction.	130

List of Abbreviations

Abb.	Full term
<i>AJCC</i>	<i>American Joint Committee on Cancer</i>
<i>BCT</i>	<i>Breast- Conserving Therapy</i>
<i>CBC</i>	<i>Complete Blood Count</i>
<i>CBS</i>	<i>Conservative Breast Surgery</i>
<i>CT</i>	<i>Computed Tomography</i>
<i>CTH</i>	<i>Chemotherapy</i>
<i>DCIS</i>	<i>Ductal Carcinoma in Situ</i>
<i>DIEP</i>	<i>Deep Inferior Epigastric Perforator</i>
<i>ER</i>	<i>Estrogen-Receptor</i>
<i>HRT</i>	<i>Hormone Replacement Therapy</i>
<i>LD</i>	<i>latissimus Dorsi</i>
<i>MRI</i>	<i>Magnetic Resonance Imaging</i>
<i>MRM</i>	<i>Modified Radical Mastectomy</i>
<i>NAC</i>	<i>Nipple-Areola Complex</i>
<i>PR</i>	<i>Progesterone-Receptor</i>
<i>PVBs</i>	<i>Paravertebral Blocks</i>
<i>RTH</i>	<i>Radiotherapy</i>
<i>TNBC</i>	<i>Triple Negative Breast Cancer</i>
<i>TRAM</i>	<i>Transverse Rectus Abdominis Myocutaneous</i>

ABSTRACT

Background: Breast cancer remains the leading type of cancer affecting females in Egypt. More and more patients and surgeons are opting for breast reconstruction after radical surgery for breast cancer, partly due to more heightened awareness of the matter and partly due to more innovation in the techniques used.

Aim of the Study: To compare the outcomes between early and late latissimus dorsi myocutaneous flap reconstruction as regards cosmetic outcome, complication rate and recurrence rate for female breast cancer patients in Egypt.

Methodology: This is a retrospective analysis study. This study included 60 patients who underwent Latissimus-Dorsi Flap reconstructions for breast cancer in Nasser Institute Hospital and Ain Shams University Hospitals between January 2013 and December 2016.

Results: This study found that, overall patients' age ranged from 23 to 48 years with a mean of 35.38 years. The majority of patients (93.3%) had invasive ductal carcinoma while (6.7%) had invasive lobular carcinoma, with a cancer stage of I (36.7%) or II (48.3%). None of patients had silicone or other co-morbid conditions. About 73% of patients underwent Modified Radical Mastectomy (MRM), while 27% underwent Conservative Breast Surgery (CBS) for their breast cancer. All patients have received adjuvant CTH while 68.3% have received the adjuvant RTH. No statistically significant difference between the two groups regarding the age of the patients or the receipt of adjuvant RTH.

Conclusion: Plastic surgery plays an important role in the treatment of patients with breast cancer. Breast reconstruction with LDMF is widely applicable and can correct almost all post-mastectomy defects.

Keywords: *Breast Cancer - Dorsi Flap Reconstruction – Early and Late Latissimus*

INTRODUCTION

Breast cancer remains the leading type of cancer affecting females in Egypt (*Ibrahim et al., 2014*). More and more patients and surgeons are opting for breast reconstruction after radical surgery for breast cancer (*Panchal and Matros, 2017*), partly due to more heightened awareness of the matter and partly due to more innovation in the techniques used (*Perdikis et al., 2011*).

Preserving a breast shape after surgery for breast cancer is becoming more and more a target for both patients and surgeons, due to the psychological and social impacts that this has on the patient (*Rowland et al., 2000*).

This outcome can be achieved through what is called oncoplastic techniques, which are techniques that are built on principles of plastic surgery to achieve cosmetic outcomes without compromising any of the oncologic measures. Oncoplastic techniques are either volume displacement techniques aimed at achieving safe margins of resection of the tumour while managing to preserve the shape and appearance of the breast, or through volume replacement reconstructive techniques where the volume and shape of the breast is replaced by either autologous tissue, or by prosthetic methods (*Munhoz et al., 2013*).

The type and timing of breast reconstruction after breast cancer depend on several factors including the need for adjuvant therapy, desire for cosmesis and the surgeon's experience and preference. Additionally, oncoplastic approach may begin at the time of surgery (immediate), weeks (delayed-immediate) or months to years afterwards (delayed) (**Munhoz et al., 2013**).

Latissimus Dorsi myocutaneous flap is a volume replacement technique aimed at replacing the excised tissue with the volume of the Latissimus Dorsi muscle rotated around its pedicle (**Leff et al., 2015**). It was first described in late nineteenth century by the Italian surgeon Tanzini, but has taken its modern form in late 1970s by Schneider et al. and remains one of the most widely used reconstruction techniques to this day (**Sood et al., 2018**).

The purpose was to provide skin coverage and form restoration after modified radical mastectomies, by using the Latissimus Dorsi muscle and the overlying skin island (**Sood et al., 2018**).

Over the subsequent years, many variations have been described for this technique. There are several specific indications for latissimus dorsi flap reconstruction in breast as it can provide autogenous reconstruction for breast cancer surgeries, including mastectomies, lumpectomies, quadrantectomies as well as providing additional tissue with