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

Thesis

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List of Abbreviations

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

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 quandrantectomies as well as providing additional tissue with