Outcomes of skin sparing mastectomy with immediate breast reconstruction with Latissimus dorsi (LD) flap in surgical treatment of breast cancer

Thesis

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General Surgery

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بسم الله الرحمن الرحيم

وقُلِ اعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ ورَسُولُهُ والْمُؤْمِنُونَ

صدق الله العظيم

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Sameh Mahmoud Othman

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List of Abbreviations

ASI	:	Age-standardised incidence rate
AJCC	:	American Joint Commission on Cancer
AFG	:	Autologous fat grafting
BBD	:	Benign breast disease
BMI	:	Body mass index
BRCA	:	Breast Cancer gene
BCS	:	Breast conservation surgery
DIEP	:	Deep inferior epigastric perforator
DNA	:	Deoxyribonucleic acid
DCIS	:	Ductal carcinoma in situ
ER	:	Estrogen receptor
FCI	:	Fasciocutaneous infragluteal
FSH	:	Follicle-stimulating hormone
HER2/neu	:	Human epidermal growth factor type 2 receptor
hPL	:	Human placental lactogen
iGAP	:	Inferior gluteal artery perforator
IDC	:	Infiltrating ductal carcinoma
ILC	:	Infiltrating lobular carcinoma
LD	:	Latissimus dorsi
LCIS	:	Lobular carcinoma in situ
LRs	:	Local recurrences
MRI	:	Magnetic resonance imaging
MRM	:	Modified radical mastectomy
NAC	:	Nipple-areolar complex
PAP	:	Profunda femoral artery perforator
PR	:	Progesterone receptor
RS	:	Recurrence score
SERMs	:	Selective estrogen receptor modulators

List of Abbreviations (Cont.)

SLNB	:	Sentinel lymph node biopsy
SSM	:	Skin-sparing mastectomy
sGAP	:	Superior gluteal artery perforator
CS/FS	:	Surface sheet—superficialis fascia
TRH	:	Thyrotropin-releasing hormone
TMG	:	Transverse myocutaneous gracilis
TRAM	:	Transverse rectus abdominis myocutaneous
UICC-AJCC:		Union for International Cancer Control and American Joint Committee on Cancer
WHO	:	World Health Organization

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Introduction

Breast cancer is a devastating disease affecting women of all ages worldwide with the age incidence in Egypt being one decade younger than the mean age incidence **(Farahat et al., 2017).**

Breast cancer is the most common cancer in women worldwide. It is estimated that there will be 246,660 new cases of female breast cancer and an estimated 40,450 patient will die of this disease in the United States in 2016 ***(American Cancer Society, 2016).***

In Northern Africa and the Middle East, breast cancer is also the most common cancer affecting women. It represents between 14 and 42% of all cancer sites in women. The age-standardised incidence rate (ASI) varies between 9.5 and 54 for 105 women, thus leading the WHO to consider breast cancer as a public health priority in this region of the world ***(Yazid Belkacemi et al., 2017).***

Breast conservation is oncologically safe and can be properly achieved in about 70% of patients with early stage (I-II) breast cancer with an equal 5-year survival to mastectomy. Asymmetry, nipple or skin retraction, and volume loss after breast conservation with primary closure frequently produce an unsatisfactory cosmetic outcome ***(Waleed Elnahas et al., 2016).***

Recently, the combination of oncoplastic techniques with breast conservation results in better aesthetic and oncologic outcome with achieving wide safety margins.

The oncoplastic techniques include volume displacement or replacement procedures and sometimes include contra-lateral breast surgery. Among those Oncoplastic procedures, local flaps, latissimus dorsi myo-cutaneous flap and reduction mammoplasty/masthopexy techniques ***(Munhoz et al., 2013).***

In ***1991 Toth and Lappert*** first described the term skin-sparing mastectomy (SSM), which is a technique used to extirpate the breast tissue with preservation of as much skin as possible, leaving behind an adequate skin envelope along with the infra mammary fold for optimum immediate breast reconstruction ***(A.M. Farahat et al., 2014).***

Breast reconstruction (BR) is increasingly becoming an integral part of interdisciplinary treatment of breast cancer. Loss of body image is one of the critical issues negatively impacting quality‐of‐life of breast cancer survivors. Restoration of body image is an important step toward their rehabilitation ***(Kaur et al., 2015).***

Nowadays, various options of breast reconstruction are available. It can be an implant based reconstruction or the ones using autologous tissue such as transverse rectus abdominis myocutaneous (TRAM) flap, latissimus dorsi (LD) flap or more complex techniques such as deep inferior epigastric perforator (DIEP) flap or Superior inferior epigastric artery flap. Currently, implants or expanders are the most frequently used techniques for reconstruction. However, option of breast reconstruction is available to