Immediate breast reconstruction following modified radical mastectomy for breast cancer

An Essay

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Abstract

The decision-making process for breast reconstruction that alone does not confer survival benefit can be complex and will largely rest on the patient's personal values and beliefs and guidance from the surgeon. Therefore, competency of a plastic surgeon lies not only in his or her technical skills to carry out the reconstruction but also in his or her knowledge of the advantages and disadvantages of each procedure, the different oncologic aspects, and the long-term objective and subjective implications of surgery.

Key wards

Breast cancer, sonomamography, breast self examination,triple assessment, immediate breast reconstruction, TRAM flap, Breast cancer antigen and Latissimus dorsi musculocutaneous flap.

بسم الله الرحمن الرحيم

قَالُوا سُبْحَانَكَ لاَ عِلْمَ لَنَا إِلاَّ مَا عَلَّمْتَنَا إِنَّكَ أَنت الْعَلِيمُ الْحَكِيمُ

صـدَقَ الله الـعَظِيم

سورة البقرة الاية (32)

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LIST OF ABBREVIATIONS

(TRAM) flap	:	Trasverse rectus abdominis musculocutaneous flap
AFG	:	Autologous fat grafting
BCT	:	Breast conserving therapy
BRCA1/2	:	Breast cancer antigen
BSE	:	Breast self-exams
CBE	:	Clinical breast examination
CTA	:	Computed tomography angiography
DCIS	:	Ductal carcinoma in situ
DIEP artery flap	:	Deep inferior epigastric perforator
DIEP flap	:	The deep inferior epigastric perforator
ER+	:	Estrogen receptor
FCI flap	:	Fasciocutaneous infragluteal
FDA	:	Food drug administration
FNA	:	Fine needle aspiration biopsy
free TRAM flap	:	The free transverse rectus abdominis
GAP	:	Gluteal artery perforator flap

HER2	:	Human epidermal growth factor receptor 2
IGAP flap	:	Inferior gluteal artery perforator
IHC	:	Immuno-histo-chemistry
LCIS	:	Lobular carcinoma in situ
LDMF	:	Latissimus dorsi musculocutaneous flap
M	:	Spread to distant organs
MRA	:	Magnetic resonance angiography
MRI	:	Magnetic resonance imaging
N	:	The extent of spread to the nearby lymph nodes
P53 or TP53	:	Protein53 or tumor protein53
PAP flap	:	Profunda femoral artery perforator
PEM	:	Positron emission mammography
PET	:	Positron emission tomography
PR+	:	Progesterone receptor
RT-PCR	:	Reverse transcriptase-polymerase chain reaction
SGAP flap	:	Superior gluteal artery perforator
SLN	:	Sentinel lymph node
T	:	Tnm adjacent tissues
TMG flap	:	Transverse myocutaneous gracilis

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INTRODUCTION

Breast cancer is the most common cancer among women; the life time incidence of breast cancer for American women is 8% **(Adamovich *et al.*, 2002).**

The patient at risk for breast cancer including early age at menarche, late menopause, 1st full term pregnancy after age of 30 year, history of premenopausal breast cancer or of benign proliferative disease and inherited mutations of BRCA1, BRCA2 genes account for 5% to 10% of breast cancers, thus the majority of cases are sporadic **(Sotherain *et al.*, 2002).**

The diagnostic strategies for breast cancer include history, clinical breast examination, breast imaging including: sono-mammography or magnatic resonance imaging (MRI) and tissue diagnosis including; fine needle aspiration cytology (FNAC), core needle biopsy or surgical excisional biopsy **(Kern 2001).**

The surgical management of breast cancer involves four major aspects; the breast parenchyma, the skin envelope, the nipple areola complex and axillary lymph node. There has been a trend toward a more conservative approach to the surgical extirpation of breast cancer **(Sken *et al.*, 2008).**

Currently, there are two approaches to breast cancer extirpation, the first approach is removal of the tumor with 1 to 2 cm margin of the surrounding tissue and the second approach is

removal of all breast tissue. The value of the second approach is the preservation of much of patient skin which acts as envelop for immediate breast reconstruction **(Staradub *et al.*, 2000).**

Skin sparing mastectomy with immediate reconstruction is an excellent choice for complete breast parenchymal resection and acceptable breast mound provided by an implant or flap **(Noorani *et al.*, 2008).**

The technique of skin sparing mastectomy as an oncologically safe one, based on an absence of breast ductal epithelium at the margin of the native skin flaps, so it isn't an option if there is possibility that tumor cells, are close to the skin such as inflammatory breast cancer **(Carlson 2003).**

Skin sparing mastectomy isn't usually performed if you have decided that you will not have immediate breast reconstruction **(Downes *et al.*, 2005).**

Immediate reconstructive breast procedure includes many techniques which include implant pedicled flap, free flap reconstruction or combined implant and flap reconstruction **(AL derman *et al.*, 2003).**

Flaps reconstruction include latissmus dorsi myocutaneus flap, transversus rectus abdominis myocutaneus transposition flap and micro-vascular composition tissue transplantation **(Arumugam *et al.*, 2005).**

AIM OF THE WORK

The aim of the work is to spotlight the different types of malignant breast tumors and to review different techniques, benefits, results and complications of immediate breast reconstruction following modified radical mastectomy for breast cancer.