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HOSSAM MAGHRABY

Evaluation of Central Quadrantectomy and Immediate Reconstruction in Patients with Retroareolar Breast Cancer

Thesis
Submitted for Partial Fulfillment of Master Degree in General Surgery

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List of Abbreviations

Abb.	Full term
ACR	*American College of Radiology*
ALND	*Axillary Lymph Node Dissection*
BCT	*Breast-Conserving Therapy*
DCIS	*Ductal Carcinoma in Situ*
IDC	*Invasive Duct Carcinoma*
ILC	*Invasive Lobular Carcinoma*
IMF	*Inframammary Fold*
LCIS	*Lobular Carcinoma in Situ*
LND	*Lesion Nipple Distance*
MRI	*Magnetic Resonance Imaging*
MRM	*Modified Radical Mastectomy*
NAC	*Nipple and Areola Complex*
OBS	*Oncoplastic Breast Surgery*
OPS	*Oncoplastic Surgery*
U/S	*Ultrasound*
UOQ	*Upper Outer Quadrant*
US	*Ultrasonography*

ABSTRACT

Background: Centrally located breast cancer represents 5–20 % of all breast cancer cases. Oncoplastic breast surgery combines oncological principles with plastic surgical techniques; it requires knowledge of anatomy, and appreciation of symmetry, esthetics and breast function.

Aim of the Work: The aim of the current study is to present and assess multiple techniques of surgical outcome of oncoplastic techniques following the resection of centrally located breast cancer.

Patients and Methods: This prospective study comprised of 24 female patients with central breast cancer from November 2018 to Feb 2020 at the department of surgery Ain-Shams University Hospitals. Patients were followed up every 3 months for at least 12 months. Informed consent was obtained from the patients, and this study was approved by Al. Demerdash Hospital ethics committee.

Results: In our study, statistics shows to some extent, when NAC is not involved Flierl and Hanker [11] reported satisfactory results with central quadrentectomy and immediate reconstruction in patients with retroareolar breast cancer.

The mean age was 49.83 ± 7.6 years (range; 39 to 60). 13/24 patients (54.16%) were premenopausal while 11/24 (45.83%) patients were postmenopausal. 5 patients had diabetes mellitus and the rest of patients were non diabetic. Four patients (16.6%) had positive family history of breast cancer. Six patients had nipple retraction (25%). The mean tumour size was 2.52 ± 0.64 cm (0.9-2.8 cm).

The spectrum of safety margin ranged from (1.9-2.8cm) the mean safety margin in our study is 2.19±0.32, the overall percentage of complications was 5/24 (20.8%). Pathological nipple infiltration was found in 12 cases (50%) showed clinical and/or radiological evidence of nipple involvement and underwent resection of the NAC (Grissoti and Melon slice techniques). 14 patients (58.33%) had positive axillary lymph nodes, all staged as pN1; while the other 10 patients (41.66%) where staged as pN0. There is significant statistical difference between the two groups; Patient dissatisfaction is due to presence of scar, breast shape asymmetry and absence of NAC as in Grisotti and Melon slice groups or asymmetry as in Inferior pedicle group.

Conclusion: Multiple oncoplastic breast surgery techniques used in treatment of CLBC with good cosmetic and oncological outcome but need more training to have good results.

Keywords: *Central Quadrentectomy - Immediate Reconstruction - Retroareolar Breast Cancer*

INTRODUCTION

Oncoplastic breast-conservation surgery combines oncologic principles with plastic surgical techniques, but it is much more than a combination of two disciplines; it is a philosophy that requires vision, passion, knowledge of anatomy, and appreciation and understanding of esthetics, symmetry, and breast function ***(Silverstein, 2010).***

Centrally located breast tumors represent a challenge to surgeons who must fulfill the main goals of breast conserving surgery, both adequate free margins and acceptable appearance and symmetry to the other breast. ***(Grisotti et al., 2010).***

Centrally located breast tumors represent 5–20 % of all breast cancer cases. Traditionally These used to be excluded form breast conservation and were invariably offered mastectomy as the sole treatment as the NAC was resected.This may be attributed to the fear of local control failure and risk of tumor multicentricity ***(Multon et al., 2007).***

In regards to breast conserving surgery, one of the most debated aspects by the scientific community is the study of the resection margins, along with their clinical and therapeutic implications. Many definitions of "negative margins" have been given so far in the scientific literature. A recent study has defined the negative margin as the margin that doesn't have cancer cells in the ink colored section, the so called "no tumor on ink" ***(O'Kelly Priddy et al., 2016).***

For decades women with breast cancer were offered two surgical options: small lesions were treated with lumpectomy and radiotherapy (breast-conserving therapy, BCT), and large tumours by mastectomy. Oncoplastic surgery emerged as an additional surgical strategy 20 years ago. The objective was to allow oncologically safe breast conservation, by performing a wide excision for large or poorly located tumours, while limiting the risk of postoperative deformities. Most publications suggest that there is a major risk of deformity after standard BCT when more than 20 per cent of the breast volume is excised ***(Clough et al., 2012).***

The choice of the oncoplastic techniques depends on the achievement of free safety margins, the breast volume, and its ptotic degree. For example, oncoplastic volume displacement such as Grisotti technique is suitable in ptotic breasts while reduction vertical mammoplasty is suitable for large and huge breasts. Additionally, volume replacement techniques including total breast reconstruction is suitable in cases of small breast and/or non-ptotic breasts or when the safety margins could not be achieved in conservative surgery ***(Farouk et al., 2015).***

They includes the use of plastic techniques to achieve resection of the tumor with safety margins maintaining good cosmetic outcomes and symmetrizing surgeries for the contralateral breast if needed, the technique used depends on several factors such as tumor location, size, tumor to breast ratio and patients' desires ***(Piper et al., 2015).***