Oncoplastic and Reconstructive Techniques in Early Breast cancer

Essay

Submitted for the Partial Fulfillment Of the Master Degree in General Surgery

Presented by:

Amira Maher Riad Hassan

Supervised by:

Prof. Dr. Ashraf Abd El Mogheny Mostafa

Professor of General Surgery
Faculty of Medicine, Ain Shams University

Prof. Dr. Mohamed El Sayed El Shinawi

Professor of General Surgery
Faculty of Medicine, Ain Shams University

Dr. Mahmoud Abd El Baky

Lecturer of General Surgery
Faculty of Medicine, Ain Shams University

Faculty of Medicine
Ain Shams University
2017

First thanks to **ALLAH** *to whom I relate any success in achieving any work in my life.*

I wish to express my deepest thanks, gratitude and appreciation to ***Prof. Dr. Ashraf Abd El Mogheny Mostafa,*** *Professor of General Surgery Faculty of Medicine, Ain Shams University for his meticulous supervision, kind guidance, valuable instructions and generous help.*

Special thanks are due to ***Prof. Dr. Mohamed El Sayed El Shinawi,*** *Professor of General Surgery Faculty of Medicine, Ain Shams University for his sincere efforts, fruitful encouragement.*

I am deeply thankful to ***Dr. Mahmoud Abd El Baky,*** *Lecturer of General Surgery Faculty of Medicine, Ain Shams University for his great help, outstanding support, active participation and guidance.*

Amira Maher Riad Hassan

Dedication

*Finally, I want to dedicate this work to the soul of my dear **Father**, my beloved **Mother** and all the members of my family and my dear friends because of their patience and support.*

سورة البقرة الآية: ٣٢

List of Contents

Title Page No.

List of Tables

Table No.	Title	Page No.

List of Figures

List of Figures cont…

List of Figures cont...

List of Figures cont…

List of Abbreviations

Abb.	Full term
ADH	*Atypical ductal hyperplasia*
ALH	*Atypical lobular hyperplasia*
API	*Asian/Pacific Islander*
BC	*Breast cancer*
BCS	*Breast-conservation surgery*
BCS	*Breast-conserving surgery*
CT	*Computerized tomography*
ER	*Estrogen receptors*
FNA	*Fine needle aspiration*
GEP	*Global gene expression profiling*
HRT	*Hormone replacement herapy*
ICAP	*Intercostal artery perforator*
IMF	*Inframammary fold*
LD	*Latissimus Dorsi*
LD	*Latissimus dorsi*
MDT	*Multi- disciplinary team*
MDTs	*Multidisciplinary teams*
MRI	*Magnetic resonance imaging*
NAC	*Nipple and areola complex*
NAC	*Nipple-areola complex*
NC	*Neoadjuvant chemotherapy*
OPS	*Oncoplastic surgery*
PDS	*Polydioxanone*
PPV	*Positive predictive value*
PR	*Progesterone receptors*
SLN	*Sentinel lymph node*
SM	*Simple mastectomy*

List of Abbreviations cont…

Abb.	Full term
TDAP	*Thoracodorsal artery perforator*
TRAM	*Transverse rectus abdominis myocutaneous flap*
TSSM	*Total skin-sparing mastectomy*

Abstract

The volume replacement including the implant based reconstruction the autologous reconstruction like reconstruction with latissimus dorsi and TRAM flap. Each group has different indication and timing (immediate and delayed reconstruction).

The knowledge base of the oncoplastic surgeon should include a detailed understanding of the planning, selection and evaluation of the oncoplastic technique according to each patient.

Successful breast cancer treatment demands a collaborative team approach, requiring dynamic communication between a diverse group of specialists. In fact, a careful preoperative assessment helps to establish a comprehensive surgical plan that will achieve better results.

Oncoplastic surgery has begun to grow as a new subspecialty. As more surgeons adopt the oncoplastic concept, more techniques will be developed, advancing the subspecialty of breast surgical oncology.

Keywords: *Transverse rectus abdominis myocutaneous flap - Polydioxanone- Progesterone receptors- Latissimus dorsi Neoadjuvant chemotherapy- Inframammary fold*

INTRODUCTION

Female breast has always been a symbol of beauty, fertility and femininity. In disease, however, it has challenged physicians since antiquity.

Breast cancer is the most common cancer affecting women. This cancer has a lifetime risk for one in every eight women. Surgical treatment of breast cancer has evolved from very radical debilitating surgeries to minimally invasive techniques and from disfiguring procedures to reconstructive excellence ***(Kirby et al., 2011).***

The history of breast cancer is a complex maze of attempts to understand the nature of this hormone-responsive cancer and the will of physicians to conquer it by physical removal (surgery), cell destruction (chemo-radiotherapy) or targeted therapy to cell receptors ***(Ritu Lakhtakia, 2014).***

Surgical management of malignant diseases represents an exemplary model of multidisciplinary management. The combined modality approach to the treatment of breast cancer patients that includes primary surgical treatment, radiation therapy, and chemotherapy needs careful integration of these modalities with the new methods of reconstructive breast cancer surgery ***(Urban and Rietjens, 2013).***

Optimal local tumor control and the prevention of recurrence or metastatic spread by surgery, radiotherapy, and

systemic therapy are the primary goal of breast cancer treatment ***(Nijenhuis et al., 2013)***

Breast-conservation surgery (BCS) is established as a safe option for most women with early breast cancer ***(Veronesi et al., 2002).***

In spite of the acceptance that most BCS defects can be managed with primary closure, the aesthetic outcome may be unpredictable and frequently achieve an unsatisfactory outcome oncoplastic surgery is the ‘‘third pathway’’ between standard BCS and mastectomy. Oncoplastic surgery (OPS) has emerged as a new approach to allow wide excision for BCS without compromising the natural shape of the breast. It is based upon integration of plastic surgery techniques for immediate breast reshaping after wide excision for breast cancer. The conceptual idea of OPS is not new, and its oncologic efficacy in terms of margin status and recurrence compare favorably with traditional BCS ***(Krishna et al., 2010).***

Oncoplastic techniques for breast conservation range from simple reshaping and mobilization of breast tissue to more advanced mammoplasty techniques that allow resection of up to 50% of the breast volume ***(Cothier-Savey et al., 1996).***

Oncoplastic reconstruction may begin at the time of BCS (immediate), weeks (delayed-immediate) or months to years afterwards (delayed). With immediate reconstruction, the