

Effect of Breast Cancer Treatment on the Psycho-Sexual Well-being in Premenopausal Female Patients

Thesis

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By

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List of Abbreviations

Abb.	Full Term
5FU	: 5-Fluorouracil
AC	: Adriamycin, Cyclophosphamide
AI	: Aromatase inhibitors
AJCC	: American Joint Committee on Cancer
BCS	: Breast conserving surgery
BISF-W	: Brief Index of Sexual Functioning for Women
CAF	: Cyclophosphamide, Doxorubicin, 5-Fluorouracil.
CEF	: Cyclophosphamide, Epirubicin, 5-Fluorouracil.
CMF	: Cyclophosphamide Methotrexate Fluorouracil
CSFQ	: Changes in Sexual Functioning Questionnaire
CT	: Computed tomography
DCIS	: Ductal carcinoma in situ
ddP	: Dose-dense Paclitaxel
DFI	: Disease-free interval
DFS	: Disease-free survival
DFS	: Disease free survival
DHEA	: Dehydroepiandrosterone
DISF/DISF-SR	: Derogatis Interview for Sexual Functioning
EBCTCG	: Early Breast Cancer Trialists' Collaborative Group
EC	: Epirubicin, Cyclophosphamide
ER	: Estrogen receptor
FAC	: Fluorouracil, Adriamycin and cyclophosphamide
FEC	: 5 Fluorouracil, epirubicin ,cyclophosphamide.
FFPE	: Formalin-fixed paraffin-embedded
FSFI	: Female Sexual Function Index
GnRH	: Agonists Gonadotropin-releasing hormone
GRISS	: Golombok Rust Inventory of Sexual Satisfaction
HER2	: Human epidermal growth factor receptor 2
HR	: Hazard ratio
HRQOL	: Health related quality of life
HRS	: High risk risk RS
IDC	: Infiltrating ductal carcinoma
IHC	: Immunohistochemical
IRC	: Intermediate risk RS
LCIS	: Lobular carcinoma in situ

List of Abbreviations

Abb.	Full Term
LHRH	: Luteinizing Hormone-Releasing Hormone
LRS	: Low risk RS
MRM	: Modified radical mastectomy
OR	: Ovarian reserve
OS	: Overall survival
P	: p value
PET/CT	: Positron emission tomography-computed tomography
PR	: Progesterone Receptor
QOL	: Quality of life
RS	: Recurrence score
RT	: Radiotherapy
SLN	: Sentinel lymph node
TAC	: Docetaxel (Taxotere), Adriamycin (Doxorubicin) Cyclophosphamide
UK	: United Kingdom
WHO	: World Health Organization

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Abstract

Breast cancer is considered the most common type of cancer among females worldwide. In Egypt its incidence is 32% of all cancers. Advances in diagnostic and treatment modalities resulted in increased survival rates (3). Thus focusing on the quality of life after diagnosis and treatment is becoming mandatory. In a culture in which females who talk about their sexual problems are frowned upon. Many breast cancer patients suffer in silence struggling with their sexual problems.

Aim: In our study we aim to assess the effect of breast cancer treatment on sexuality among Egyptian breast cancer patients.

Methodology: Data were collected from 105 females attending the chemotherapy and breast cancer outpatient clinic at Ain Shams university hospital starting March 2016 till December 2016

Inclusion criteria: females equal or below 55 years old, histopathologically proved to have breast cancer, married, premenopausal at time of diagnosis, operated and on adjuvant treatment.

Exclusion criteria: metastatic and double primary cancer patients.

Results: The median age of our patients was 43 years old. With 89.5 % housewives, 85.7% ECOG 1, 14.3% ECOG 2 and 80% with no known comorbidities. Unfortunately, 98.1% were circumcised and only 21% attended university. 53.3% underwent MRM while 46.7% underwent BCS. 64.8% received Rth. 28.6% were on chemotherapy (+- trastuzumab), 59.1% on tamoxifen (+- trastuzumab) and 12.3% on aromatase inhibitors or trastuzumab alone or tamoxifen plus LHRH analogue. We studied the effect of multiple demographics on sexuality; there was no statistically significant correlation between the FSFI total score and age, residence, education, comorbidities, menstruation and employment. The only statistically significant correlation was with the years of marriage with a p value of 0.024.

Conclusion: Type of Surgery doesn't affect sexuality, but body image affects sexuality and because body image is affected by type of surgery with better scores for BCS. Thus, type of surgery may have an indirect effect on sexuality. All types of systemic therapy affect sexuality with a more negative effect for patients on chemotherapy in comparison to patients on tamoxifen.

Keywords: Breast Cancer – Quality of Life – sexuality – Chemotherapy - Surgery

Introduction

Breast cancer is the most commonly diagnosed cancer and the leading cause of cancer death among women worldwide, accounting for 25% of total cancer cases **(American Cancer Society 2016)** . It ranks as the most prevalent cancer among women in the Middle East and Northern Africa **(Ferlay et al. 2015)**. In Egypt, breast cancer is the most common type of cancer among females **(Ibrahim et al. 2014)**

Advances in diagnostic and treatment modalities resulted in increased survival rates. Thus, coping with breast cancer as a chronic disease is becoming mandatory **(Kelsey & Berkowitz 2010)**

Adjuvant treatment modalities improve progression free survival (PFS) and overall survival (OS) in breast cancer patients **(Eifel et al. 2001)**. They include; chemotherapy, hormonal therapy, human epidermal growth factor receptor (HER2) directed therapy and radiation therapy **(Rampurwala et al. 2014)**

QOL is becoming of great importance in the assessment of treatment outcomes in cancer patients. That is why it has been the focus of clinical practice and research in the recent decades **(Grimison & Stockler 2007)**.

Breast cancer could be regarded as a disease that relates to women's identities. Hence, affecting sexual functioning especially younger patients **(Ptacek et al. 2007)**.

In a previous study, the type of surgery whether breast conserving surgery or mastectomy affected their sexual self-esteem. But women who had undergone mastectomy experienced lower sexual self-esteem (H Kedde et al. 2013).

Chemotherapy has considerable effect on the quality of life of breast cancer patients. Women receiving postoperative adjuvant chemotherapy (single agent or a multi-drug regimen) reported that the treatment was '*unbearable*' **(Palmer et al. 1980)**.

Recent studies that assessed adjuvant hormonal therapies and quality of life in early-stage breast cancer patients reported more encouraging results. Most studies found that the overall quality of life was improved in patients receiving either tamoxifen or anastrozole, but patients reported different side effects **(Cella et al. 2006)**.

However, some studies showed that receiving chemotherapy, radiotherapy or hormone therapy was not associated with significant deterioration of quality of life. A significant amount of literature has shown that the impairment in quality of life due to such therapy is minor and

limited to short term rather than long term effect **(Buijs 2008)** .

Adjusted for disease severity and treatment factors, younger women in one study fared worse after breast cancer diagnosis than older women, both in terms of physical and psychosocial function **(Kroenke et al. 2004)**.

Unfortunately, No Studies were conducted to address the psycho-sexual wellbeing of breast cancer among young Egyptian female patients up till now.

Aim of the Work

The aim of this study is to analyze the effect of treatment (surgery, chemotherapy and hormonal therapy) on the quality of life and sexual well-being among Egyptian breast cancer female patients.

Incidence and Mortality of Breast Cancer

According to the Globocan cancer fact sheet of 2012, Breast cancer is considered the second most common cancer worldwide, the most frequent among women with about 1.67 million new cases in 2012 worldwide (25% of all cancers) with slightly more cases in less developed countries (883,000 cases) than more developed countries (794,000 cases)(**Ferlay et al. 2015**).

Breast cancer ranks as the fifth cause of death from cancer worldwide. In less developed countries, it is the most frequent cause of cancer death (324,000 deaths, 14.3% of total). In more developed countries it is now the second cause of cancer death (198,000 deaths, 15.4%) after lung cancer (**American Cancer Society 2016**).

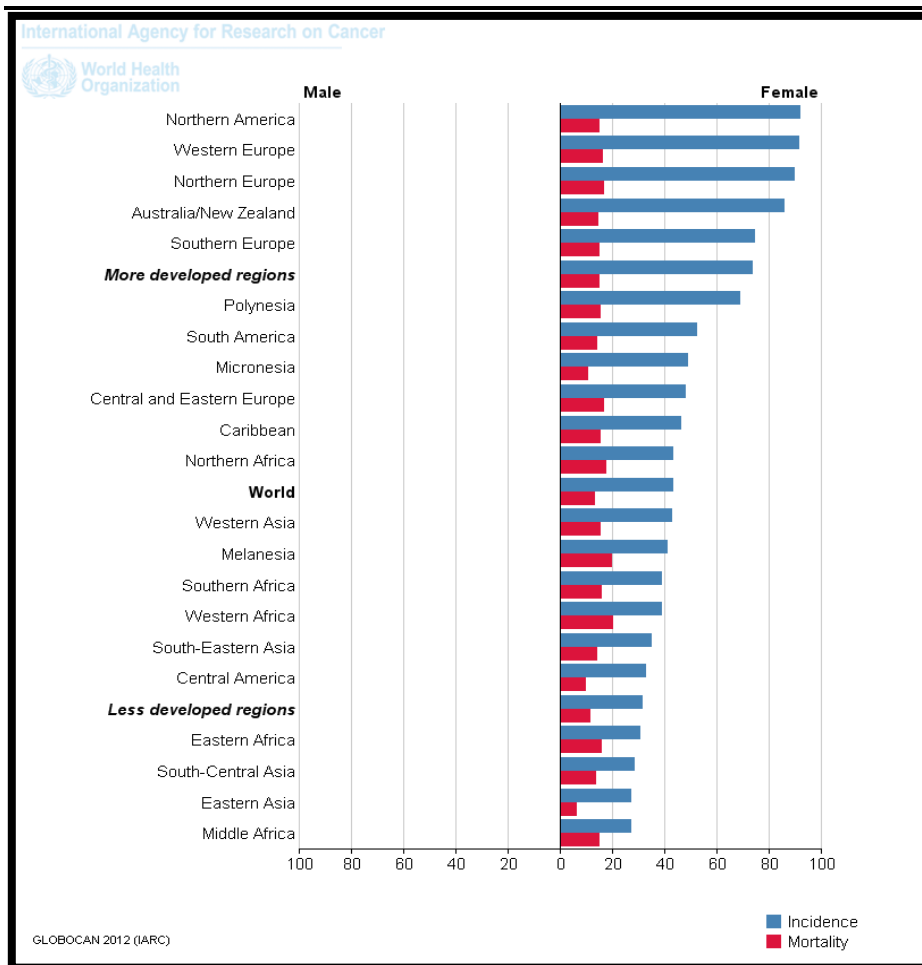


Figure (1): Breast Cancer, Estimated Incidence, Mortality and Prevalence Worldwide according to GLOBOCAN 2012

According to the American Cancer Society 2016, cancer facts and figures sheet, about 246,660 women in the United States will be diagnosed with Invasive breast cancer and about 61,000 with in situ breast cancer, with an estimate of about 40,450 deaths from breast cancer. But overall, the rate of breast cancer death has declined by 36% from 1989 to 2012 with avoidance of approximately 249,000 breast cancer

deaths due to improvements in early detection and treatment **(Siegel et al. 2016)**.

In Europe, about 494,000 new cases of breast cancer were diagnosed in 2012 and about 143,000 died from breast cancer in the same year according to Globocan 2012 **(Ferlay et al. 2015)**.

According to the cancer research UK statistics; Breast cancer is the most common cancer in UK females, accounting for around a third (31%) of all female cases (2014). There were around 55,222 new cases of breast cancer in the UK in 2014, that's 150 cases diagnosed every day. Almost half (46%) of female breast cancer cases in the UK each year are diagnosed in females aged 65 and over (2011-2013). In 2014 in the UK around 11,400 women died from breast cancer, that's around 31 every day, of which around 1,152 deaths occurred in women aged under 50 **(Cancer Research UK 2014)**.

In the Arab world, surgeons and oncologists dealing with breast cancer tend to believe that it presents at an earlier age with a more advanced stage at presentation **(Najjar & Easson 2010)**. According to Ibrahim et al, 2014; breast cancer proportion was 32% of all cancers among Egyptian females from 2008 -2011 which makes it the most common type of cancer among females deaths **(Ibrahim et al. 2014)**.