

MANAGEMENT AND OUTCOME OF BREAST CANCER PATIENTS WITH IPSILATERAL SUPRACLAVICULAR LYMPH NODES INVOLVEMENT AT PRESENTATION "RETROSPECTIVE STUDY"

A thesis submitted in fulfillment of M.Sc. degree.

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List of abbreviations

2D	Two-dimensional
3D	Three-dimensional
AC	doxorubicin & cyclo-phosphamide
AJCC-TNM	American Joint Committee on Cancer Tumor Node Metastasis
ASCO	American Society of Clinical Oncology
BCS	Breast-conserving surgery
CT	Computerized tomography
c PR	Clinical partial response
DFS	Disease free survival
EBR	External-beam irradiation
EFS	Event-free survival
ER	Estrogen receptor
FH	Family history
GnRH	gonadotropin-releasing hormone
LABC	Locally advanced breast cancer
LRF	Loco-regional failure
LRR	Local recurrence rate
MRI	Magnetic resonance imaging
MRM	Modified radical mastectomy
NAC	Neoadjuvant chemotherapy
NCCN	National Comprehensive Cancer Network
NEMROCK	Kasr Alainy clinical oncology department
NX	capecitabine and vinorelbine
OS	Overall survival
pCR	Pathological complete remission
PEPI	Preoperative endocrine prognostic index
PR	Progesterone receptor
RCB	Residual cancer burden
RFS	Relapse free survival
RT	Radiotherapy
SCLNs	Supraclavicular lymph node
SPSS	Statistical Package for Social Sciences
TAC	docetaxel, doxorubicin & cyclophosphamide
TN	Triple-negative
TNBC	Triple-negative Breast cancer

Abstract

This study was a Retrospective observational descriptive study. We reviewed the records of breast cancer patients with synchronized with ipsilateral SCLNs involvement without distant metastasis who were seen in the clinic in the last 6 months [Feb 2016-August 2016] at (NEMROCK) oncology Department, Kasr Al-Ainy School of Medicine. Clinicopathological data was described as age, menopausal status, stage, etc. Treatment was also defined as local aggressive treatment including surgery, axillary lymph node dissection (ALND), radiotherapy (RT), and systemic chemotherapy, hormonal and target therapy. To evaluate the effectiveness of management and outcome of different modalities of treatment offered to them. The study also aimed to investigate a number of secondary outcomes as Survival (Sites of relapse, Relapse Free Survival, Disease Free Survival, Overall Survival, etc), as well as looking at possible effects of the intervention on variables such as age, severity of treatment and time since diagnosis.

Key words

Breast cancer - Supraclavicular lymph nodes metastasis - Ipsilateral

Introduction and Aim of work

Introduction

Breast carcinoma are the second most common cancer in the world, a vast majority incessant harm influencing ladies. Furthermore it ranks as the fifth reason of death from cancer generally speaking. [Globocan, 2012].

The occurrence of patients with breast cancer who exhibit with ipsilateral supraclavicular lymph node (SCLNs) metastasis without inaccessible spread in chance of diagnosis, is low (1-4%) [Chen et al 2002, Grotenhuis, Klem, & Vrijland, 2013].

In spite of the low incidence, the supraclavicular patient group represents an uncommon subcategory inside the most recent (7th) release of the American Joint Committee on Cancer Tumor Node Metastasis (AJCC-TNM) staging system for breast cancer that might have been reconsidered over 2002, metastasis previously, to be viewed as locoregional disease and classified as N3c [Green et al 2002, Singletary et al 2002]. Inside the arrangement of TNM stage grouping for breast cancer, this subcategory is spoken to be in stage IIIC (any T, N3, M0) [Green et al 2002].

Historically, the position of this selected patient group with supraclavicular ailment has changed over in the arrangement framework. In 1987, the AJCC-TNM staging system (5th edition for breast cancer) transformed those arrangements of patients with supraclavicular metastases from N3 to M1 in order to reflect the poor prognosis of patients with this presentation [Debois 1997, Jackson 1966, Kiricuta et al 1994].

Patients with SCLNs inclusion were considered to have a prognosis comparative to those with stage IV disease (any T, any N, M1). Ipsilateral SCLNs metastases from breast cancer were regarded an ominous sign; most patients created inaccessible metastases within one year from claiming identification [Debois 1997, Jackson 1966, Kiricuta et al 1994]. Hence, a significant number of patients were treated with palliative expectation.

Many studies published their series on patients with isolated ipsilateral SCLNs metastases in breast cancer patients who underwent multimodality treatment comprising of chemotherapy, surgery, furthermore radiotherapy. It seemed that patients with this special category will do well than patients with distant metastatic disease [*Grotenhuis, Klem, & Vrijland, 2013*].

Aim of Work

This work is retrospectively review the data of breast cancer patients presenting with ipsilateral supraclavicular lymph node (SCLNs) involvement without distance metastasis and designed to define the presentation, management and outcome of patients in this special category presented at the follow up clinic in Kasr Alainy clinical oncology department (NEMROCK) in the period between (Feb 2016-August 2016).

Review of the literature

Chapter 1: Locally Advanced Breast Cancer

Locally advanced breast cancer (LABC) constitutes a significant clinical challenge; because of the larger part of patients with LABC will experience disease relapse and inevitably die, regardless of combative multimodality treatment. [Giordano et al 2003].

LABC is a term that alludes to most advanced stage non metastatic breast tumors and includes a wide variety of clinical scenarios, usually encompasses stage III disease figure 1, characterized Likewise T0–T3 primary tumours with clinically perceivable axillary (matted or fixed), ipsilateral infraclavicular, supraclavicular or internal mammary lymph nodes (N2 or N3 disease) or tumour extension to the chest wall or skin (T4) regardless of nodal status, Table 1 [Wiley-Blackwell 2009].

In some cases the meaning of LABC is increased to incorporate patients with clinical stage IIB disease Table 1, such as primary tumor ≥ 5 cm and no nodal association (T3 N0). However, most experts consider patients with stage IIB–IIIA (T3 N0–1) as ‘large operable’ breast cancers, in contrast to truly inoperable situations with inflammatory and/or far reaching skin, fixed or cumbersome axillary nodal disease and/or supraclavicular or internal mammary nodal inclusion [Taghian,et al 2013].

Patients with LABC must be managed with combined therapy utilizing systemic and locoregional modalities, and require a well-coordinated treatment schedule and collaboration between medical, surgical and radiation oncologists [Kesson,et al 2012].

Clinical Staging Of Breast Cancer Patients

Clinical staging incorporates physical examination, with careful inspection and palpation of the skin, mammary gland and lymph nodes (axillary, supraclavicular and cervical); imaging; and pathologic examination of the breast or other tissues for proper determination of diagnosis of breast malignancy.

<u>T stage</u>	<u>Description</u>
Tx	Primary tumor cannot be assessed
To	No evidence of primary tumor
Tis	(DCIS) Carcinoma in situ
Tis	(LCIS) Carcinoma in situ
Tis	Paget diseases of the nipple with no tumor
T1	Tumor ≤ 2 cm in greatest dimension
T1mic	Micro invasion ≤ 1 mm in greatest dimension
T1a	Tumor >0.1 but not >0.5 cm in greatest dimension
T1b	Tumor >0.5 but not >1 cm in greatest dimension
T1c	Tumor >1 but not >2 cm in greatest dimension
T2	Tumor >2 but not >5 cm in greatest dimension
T3	Tumor > 5 in greatest dimension

T4	Tumor of any size with direct extension to (a) the chest wall or (b) skin only as described below
T4a	Extension to (a) the chest wall, not including the pectoralis muscle
T4b	Edema (including peau d'orange) or ulceration of the skin of the breast or satellite nodules
T4c	Both T4a and T4b
T4d	Inflammatory carcinoma
<u>* Regional LN:</u>	
Nx	Regional LN cannot be assessed
N0	No Regional LN metastases
N1	Metastases in movable ipsilateral axillary LNs: pathological involvement of 1 to 3 axillary LNs
N2	Metastases in ipsilateral axillary LNs fixed or matted , or clinically apparent ipsilateral internal mammary LNs in absence of clinically evident axillary LN metastases; pathological involvement of 4 to 9 axillary LNs
N2a	Metastases in ipsilateral axillary LNs mixed or matted , or to the other structure

N2b	Metastases in clinically apparent ipsilateral internal mammary LNs and in the absence of clinically evident axillary LN metastases
* <u>N3:</u>	
N3a	Metastases in ipsilateral infraclavicular lymph nodes and axillary lymph nodes
N3b	Metastases in ipsilateral internal mammary lymph nodes and axillary lymph nodes
N3c	Metastases in ipsilateral supraclavicular LNs
* <u>Metastases (M):</u>	
Mx	Distant metastases cannot be assessed
M0	No Distance metastases
M1	Distant metastases

Table 1. TNM staging system for breast cancer Primary tumor [Singletary et al, 2003, National Cancer Institute,2010].