

# A study of different treatment modalities for carcinoma of breast at tertiary health care center

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## Abstract

**Introduction:** The World Cancer Report issued by the International Agency for Research on Cancer (IARC), tells us that cancer rates are set to increase at an alarming rate globally. **Aims and Objectives:** To Study Different Treatment Modalities for Carcinoma of Breast at tertiary health care center. **Material and Methods:** After approval from Institutional ethical committee a cross-sectional study carried out in all Cases of Carcinoma of Breast that has undergone treatment from April 2012 to April 2014 at Department of General Surgery of CPR hospital attached to RCSM Government Medical College Kolhapur. All the patients were treated as per the protocol by Surgically, Radiology and Chemotherapy and Neo-adjuvant therapy as per necessary in one-year duration such a way 50 patients were selected. **Result:** 38 patients (76%) of the total 50 patients underwent modified radical mastectomy (MRM). Simple mastectomy (SM) was done in 4 patients (8%) post-operative complication was lymphedema in 10 patients (23.8%) out of 38 patients. post-operative complications were Flap necrosis 2(4.76%) and wound infection 1 patients (1.19%) out of 38 patients. In treatment of stage IV disease NACT+MRM+ post-operative adjuvant therapy required in 8 % and Adjuvant therapy only required in 67% and Simple Mastectomy and Post-operative adjuvant therapy required in 25 % individuals. Out of the total 50 patients neo-adjuvant CT(NACT) was given in 6 patients (12%), post-operative / adjuvant therapy 3 i.e. 6% patients. CT was given as CT only 20%, T+RT-30% CT+HT-16% CT+RT+HT-16 %. Of the total 47 patients of chemotherapy, CT was delayed in 10 patients (21%). CT was not stopped in any patients. 46 patients (92%) remained disease free, two patients with previously diagnosed stage III disease developed metastasis to bone. One patients with stage IIIB disease developed local chest wall recurrence. One patients in stage IV died after 10 months of diagnosis. **Conclusion:** It can be concluded from our study that; mortality of the patients after adequate treatment in our study was found very less i.e. 2% so proper and adequate treatment of the patients as per the standard protocol should be given for increasing survival of the breast cancer patient.

**Keywords:** NACT (Neo adjuvant Chemotherapy), MRM (Modified radical Mastectomy), HT (Hormonal therapy), RT (Radiotherapy).

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## INTRODUCTION

The World Cancer Report issued by the International Agency for Research on Cancer (IARC), tells us that cancer rates are set to increase at an alarming rate

globally. Cancer rates could increase by 50% to 15 million new cases in the year 2020.<sup>1</sup> Worldwide breast cancer is the most frequent cancer in women and represents the second leading cause of cancer death among women (after lung cancer).<sup>2,3</sup> Presently, 75,000 new cases occur in Indian women every year.<sup>4</sup> Breast cancer is the second most common malignancy in India next only of carcinoma cervix,<sup>5</sup> the lifetime risk of developed carcinoma breast in a female is 1 in 22 in urban Indian and 1 in 60 in rural india.<sup>6</sup> Breast cancer is a disease of the old age with the peak incidence in the fifth and sixth decades, but in India diseases is seen a decade earlier, probably because of shorts life expectancy in Indian women (About 65.3 years as per Indian in 2005) as compared to counterparts in USA.<sup>7</sup> The risk factors for breast cancer in western population have been extensively

investigated, and it has been suggested that reproductive and life-style related factors are strongly associated with increased risk for breast cancer.<sup>7,8</sup> various risk assessment models such as gail, clause, BRACPRO have been developed and validated in white women.<sup>9,10,11</sup> they are used to recruit women for breast cancer screening protocols. However race/ethnic difference exist in both prevalence as well as risk countries have studied risk factor profile of their populations and developed their own risk assessment protocols.<sup>12,13</sup> several reproductive risk factors have been identified and evaluated. Early menarche, late menopause, nulliparity, late age of childbirth is risk factors, whereas multiple and breast feeding offers protection against breast cancer, most of these studies were conducted in first world countries.<sup>14</sup>

**MATERIAL AND METHODS**

After approval from Institutional ethical committee a cross-sectional study carried out in all Cases of Carcinoma of Breast that has undergone treatment from April 2012 to April 2014 at Department of General Surgery of CPR hospital attached to RCSI Government Medical College Kolhapur. All the patients after written and informed consent were admitted to wards, diagnosis of carcinoma of breast was made on the basis history, clinical and pathological findings. Malignancy was confirmed by pre-operatively and biopsy and Post-operative histopathological features were classified as benign or malignant based on 2003 World Health Organization classification of tumors of breast. All the patients were treated as per the protocol by Surgically, Radiology and Chemotherapy and Neo-adjuvant therapy as per necessary. All histopathologically proven cases of carcinoma of breast were included while patients lost to follow up, patient does not given consent for treatment and to be part of study, and patient operated outside and having local regional or systemic recurrence were excluded from the study. In one-year duration such a way 50 patients were selected.

**RESULT**

**Table 1:** Spectrum of surgery

Type of surgery	No. of patients	Percentage
MRM	38	76
SM	4	8

38 patients (76%) of the total 50 patients underwent modified radical mastectomy (MRM). Simple mastectomy (SM) was done in 4 patients (8%).

**Table 2:** Postoperative complication

Complications	No. of patients	Percentage
Lymphedema	10	23.80
Flap necrosis	2	4.76
Wound infections	1	1.19

38 patients (76%) of the total 50 patients underwent modified radical mastectomy (MRM). Simple mastectomy (SM) was done in 4 patients (8%) post-operative complication was lymphedema in 10 patients (23.8%) out of 38 patients. Flap necrosis 2(4.76%) and wound infection 1 patients (1.19%) out of 38 patients.

**Table 3:** Treatment of stage IV disease

Modality of therapy	No. of patients in stage IV of diseases	Percentage of patients in stage IV diseases
A.NACT+MRM+postop adjuvant therapy	1	8
B. Adjuvant therapy only	8	67
C. SM+Post-operative adjuvant therapy	3	25
<b>Total</b>	<b>12</b>	<b>100</b>

In treatment of stage IV disease NACT+MRM+ post-operative adjuvant therapy required in 8 % and Adjuvant therapy only required in 67% and Simple Mastectomy and Post-operative adjuvant therapy required in 25 % individuals.

**Table 4:** Modality of CT given

Chemotherapy	No. of patients	percentage
NACT	6	12
Post-operative / adjuvant therapy	3	6
CT only		20
T+RT		30
CT+HT		16
CT+RT+HT		16

Out of the total 50 patients neo-adjuvant CT(NACT) was given in 6 patients (12%), post-operative / adjuvant therapy 3 i.e. 6% patients. CT was given as CT only 20%, T+RT-30% CT+HT-16% CT+RT+HT-16%.

**Table 5:** Progress of the stopped chemotherapy cycle

Progress of CT cycle	No. of patients of CT	Percentage
Delayed	10	21
Stopped	0	0

Of the total 47 patients of chemotherapy, CT was delayed in 10 patients (21%). CT was not stopped in any patients.

**Table 6:** Distribution of the Patients as per the Prognosis

Prognosis	No.	Percentage
Disease free	46	92
Metastasis to bone	2	4
Local chest wall recurrence	1	2
Death	1	2

46 patients (92%) remained disease free, two patients with previously diagnosed stage III disease developed metastasis to bone. One patients with stage IIIB disease developed local chest wall recurrence. One patients in stage IV died after 10 months of diagnosis.

## DISCUSSION

The estrogen receptor (ER) and progesterone receptor (PR) proteins are the most widely studied. Values of 10 fmol/mg or higher are considered receptor positive values below 3 to 4 gmol/mg are receptor negative, intermediate values are considered borderline. Clinical response to various forms of endocrine manipulation is evident in patients who have ER activity, less than 10% of ER negative patients are responders. More than 60% of ER positive patients respond to exogenous estrogens or endocrine ablative procedures. Adjuvant therapy has extended tumor disease free interval for most patient and lengthens overall survival for many<sup>15,16</sup>. Management of breast cancer is immunologically and histologically heterogeneous in character and requires multidisciplinary treatment.<sup>3</sup> Despite all the advances, the management of breast cancer is still a controversial topic. In our study we have found that all the cases were treated appropriately according to the stage of the disease. 38 patients (76%) of the total 50 patients underwent modified radical mastectomy (MRM) as per indications according to the national comprehensive cancer network guidelines. a one-time procedure of meticulous MRM leads to good locoregional control and still remains an important tool for managing breast cancer in developing countries. Simple mastectomy (SM) was done in 4 patients (8%) for paget's disease as a risk-reducing mastectomy and for stage IV disease with ulcer was performed for palliation. Postoperative morbidity was seen in the form of lymphedema / serosa (23.8%), flap necrosis (4.76%) and wound infection (1.19%). Literature also supports that the major factor predicting lymphedema was the number of positive lymph nodes isolated and indirectly indicates a more complete axillary dissection, which is an important prognostic indicator in cases with breast carcinoma. Patients were followed up for a period ranging from 3 months to 2 years. Patients were subjected to clinical examination and investigative procedure like USG abdomen, chest X-ray, X-ray long bones and spine, to look for loco regional recurrence or distant metastases. 46 patients (92%) remained disease free, two patients with previously diagnosed stage III disease developed metastasis to bone. One patient with stage IIIB disease developed local chest wall recurrence. One patient in stage IV died after 10 months of diagnosis.

## CONCLUSION

It can be concluded from our study that; mortality of the patients after adequate treatment in our study was found very less i.e. 2% so proper and adequate treatment of the

patients as per the standard protocol should be given for increasing survival of the breast cancer patient.

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