



BREAST CONSERVING SURGERY VERSUS MODIFIED RADICAL MASTECTOMY IN TREATMENT OF EARLY BREAST CANCER: A COMPARATIVE STUDY

General Surgery

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ABSTRACT

Background: In 1990, the National Institute of Health (NIH) released a consensus statement recommending the use of breast conserving surgery (BCS) with adjuvant radiotherapy instead of mastectomy for the treatment of early-stage (stage I or II) breast cancer, whenever possible.

Results: Total of 40 patients were included and divided into two groups. According to visual analogue scale the mean of mental satisfaction score in MRM group is 6.66, while in BCS group mean of mental satisfaction score is 7.60. P value by statistical analysis being 0.016, the difference is statistically significant.

Conclusion: In cases of early breast cancer BCS offers a better option than MRM. Patient that had undergone BCS have significantly better health status with regard to physical functioning, health perception & vitality, social functioning & role, emotional and mental health and self-esteem.

KEYWORDS

Breast cancer, Breast Conservation Surgery, Modified Radical Mastectomy

INTRODUCTION

Breast cancer is the leading cause of cancer-related death worldwide for women with increasing trend for recent years. It reported that approximately 230,480 new cases of invasive breast cancer and 39,520 breast cancer deaths occurred among US women in 2011^[1] Surgery is important for the treatment of early stage breast cancer and the operation procedure for breast experienced a long period of time^[2] Options for surgery procedure include breast conserving surgery (BCS) and mastectomy.^[3,4] For BCS, the breast can be reconstructed at the same time as surgery or later on. BCS is also called partial or segmental mastectomy. It is also sometimes called lumpectomy or quadrantectomy.^[5]

Breast conservation has become the standard of care in Western countries for early breast cancer. In India BCT still not popular due to various reasons including advanced stage at presentation, cost of treatment, lack of appropriate equipments and facilities, physician's and patient's awareness. Now by using plastic surgical technique with aim of good cosmesis, oncoplastic breast conservative surgery is emerging in current practice.

Aims & Objective: The aim of this study is to evaluate the clinical efficacy and prognosis of breast-conserving surgery versus modified radical mastectomy in the treatment of early breast cancer.

Materials and Methods

This study includes 40 cases of MRM and BCS (20-20 from each group) done for early breast cancer. All operated cases of early breast cancer in Dept. of Surgery, Nalanda Medical College Hospital Patna. The study includes prospective cases 1 year from date of approval.

Inclusion criteria

1. Patients with early breast cancer stage I and II (T1 and T2, diameter up to 5 cm, N0 and N1, M0).
2. Those who give written informed consent.

Exclusion criteria

1. Patient in advanced stage of breast cancer.
2. Patients not willing to give written consent.
3. Neoadjuvant chemotherapy patients.

Methodology

All patients in study had undergone a detailed history taking including general examination. All routine investigations including

mammography were done to stage breast cancer. Informed consent was taken from all patients included in the study. Choice taken by patient after counselling whether she want Modified Radical Mastectomy or Breast Conservative Surgery.

In all MRM group patients all breast tissue, skin, nipple areola complex and level 1, 2, 3 lymph nodes removed. In all BCS group patients, lump was removed with an envelope of normal appearing breast tissue. In all resected specimens free surgical margin was ensured via histopathology reports.

Patients were reviewed in early post operative period for complications and followed at the end of 1st, 3rd, 6th and 12th month for recurrence.

RESULT

The patients were of age group between 28 – 68years and maximum numbers of patients were of age group 45-60 years i.e. 62.5% (Table-1). Complications were present in 25% of MRM group (5 out of 20 cases), while they were absent in 75% (15 out of 20). However, in the BCS group, complications were present in 10% cases only (2 out of 20 cases), while they were absent in 90% (18 out of 20). P value by statistical analysis being 0.246, the difference being statistically insignificant (Table-2). In MRM group, 3 patients developed marginal flap necrosis, one patient developed seroma formation and one patient developed both seroma formation and marginal necrosis. However in BCS group, 2 patients developed seroma formation.

Recurrence were present in 10% of MRM group (2 out of 20) while they were absent in 90% (18 out of 20). However in BCS group recurrence was present in 10% (2 out of 20) and were absent in 90% (18 out of 20). P value by statistical analysis being 1, the difference being statistically insignificant (Table-3).

According to visual analogue scale the mean of mental satisfaction score in MRM group is 6.66, while in BCS group mean of mental satisfaction score is 7.60. P value by statistical analysis being 0.016, the difference is statistically significant.

Table 1: Age wise distribution of patients

Age group(yrs)	Number	%
25-45 yrs	8	20
45-60 yrs	25	62.5
>60yrs	7	17.5
TOTAL	40	100

Table 2: Distribution of subjects based on complications

GROUP	Complication present		Complication absent	
	Number	%	Number	%
MRM(20)	5	25	15	75
BCS(20)	2	10	18	90
TOTAL(40)	7		33	

Table 3: Distribution of subjects based on Recurrence

Group	Recurrencepresent		Recurrenceabsent	
	Number	%	Number	%
MRM(20)	2	10	18	90
BCS(20)	2	10	18	90
TOTAL(40)	4	10	36	90

DISCUSSION

Breast cancer is one of the malignant tumors that seriously threaten the health of women. The incidence is statistically increased from 1% to 8% per year.^[6] Breast cancer has become the main cause of death for women in Europe and the United States.^[7,8] The morbidity of breast cancer in China is relative low compared to the United States. However in recent years, the incidence is on the raise.^[9,10]

Complications were present in 25% of MRM group (5 out of 20 cases), while they were absent in 75% (15 out of 20). However, in the BCS group, complications were present in 10% cases only (2 out of 20 cases), while they were absent in 90% (18 out of 20). P value by statistical analysis being 0.246, the difference being statistically insignificant. This study was comparable with Veronesi U et al and Li Ma et al study.^[11,12]

On comparing, Recurrence were present in 10% of MRM group (2 out of 20) while they were absent in 90% (18 out of 20). However in BCS group recurrence was present in 10% (2 out of 20) and were absent in 90% (18 out of 20). P value by statistical analysis being 1, the difference being statistically insignificant. These results are comparable to those done by a study in Chaoyang Hospital of Capital Medical University, China from January 2010 to November 2011 where there was no significant difference in postoperative local recurrence rate and distant metastasis rate ($P > 0.05$)^[13,14].

According to visual analogue scale the mean of mental satisfaction score in MRM group is 6.66, while in BCS group mean of mental satisfaction score is 7.60. P value by statistical analysis being 0.013, the difference is statistically significant. Similar results were demonstrated by a study at Athens University Medical School – 'Laiko' General Hospital, Athens, Greece who concluded that those undergoing breast-conserving surgery were more satisfied and reported a lower impact on their self-esteem and sexual life versus those who only had MRM/ Mastectomy. Also in a multicentre randomised clinical trial in 1980 by EORTC-BCCG significant benefit in body image and satisfaction with treatment was observed in the BCS patients^[15,16,17].

No significant difference was observed in rate of recurrence between the two groups.

CONCLUSION

In cases of early breast cancer BCS offers a better option than MRM. Patient that had undergone BCS have significantly better health status with regard to physical functioning, health perception & vitality, social functioning & role, emotional and mental health and self-esteem. All women with operable breast cancer should be offered option of breast conservation if there are no standard contraindications with explanation of role of radiation in these cases.

There is no significant difference in the recurrence rate between the two groups based on our short term follow-up. However a delay long term follow-up is required.

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