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ORIGINAL ARTICLE

Comparison of Modified Radical Mastectomy with Breast Conservative Surgery in term of Recurrence of Breast Cancer

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ABSTRACT

Objectives: To compare the modified radical mastectomy with breast conservative surgery in term of recurrence of breast cancer.

Material and methods: Between April 2021 to October 2021, total 60 women having age 30 years to 60 years were selected from Department of Surgery, D.G Khan Hospital, D.G Kahn. Type of study was randomized controlled trial. Recurrence rate of breast cancer was compared between the both groups.

Results: Mean age was 43.83 ± 9.633 years mean duration of breast cancer was 5.43 ± 1.890 years. Total 5 (16.67%) patients of MRM group found with recurrence while in conservative surgery group, it was found in 13 (43.33%) patients. Significantly (P = 0.047) higher proportion of recurrence was noted in conservative surgery group as compared to MRM group.

Conclusion: Results of present study revealed that recurrence rate of breast cancer is significantly high after breast conservative surgery as compared to modified radical mastectomy. 3rd and 4th decade of life was common.

Keywords: MRM, breast cancer, breast conservative surgery, recurrence

INTRODUCTION

On the basis of demographic trends, 2.4 million newly diagnosed breast cancer cases worldwide are projected in the year 2018, accounting for about 1 case in 4 cases among the females.[1]

In modern age, breast cancer cases swiftly growing in Asia, despite the fact that breast cancer incidence is higher in western world than Asian world.[2] One recent endeavor that has been significantly inspired by this is the development of breast cancer registries. Due to an increased risk of the disease, 1 out of every 9 Pakistani women now have risk of acquiring cancer of breast.[3] Pakistan has one of the highest age-standardized incidence rates of breast cancer among Asian nations.[4] Currently, before beginning therapy for breast cancer, the size of the lesion, the state of the resection margin (whether it was impacted or not), and the histological type of the tumor are all taken into account.[5] According to CDCBC (Consensus Document for Control of Breast Cancer), the indications for various surgical procedures depends on histological type and stage. They can be nonconservative, such as mastectomy, which involves removing the entire breast, or conservative, such as quadrantectomy or lumpectomy, which involves removing the tumor along with a surgical margins of healthy tissue surrounding it.[5]

MATERIAL AND METHODS

Between April 2021 to October 2021, total 60 women having age 30 years to 60 years were selected from Department of Surgery, D.G Khan Hospital, D.G Kahn. Type of study was randomized controlled trial. Hypertensive women, women having diabetes mellitus or already underwent MRM were excluded. Ethical committee of the hospital was approved this study. Two groups A and B created randomly. Group-A was include those patients who were managed with MRM and Group-B was include those patients who were managed with breast conservative surgery. BMI was calculated after taking weight and height. Parity, marital status, lactation, contraception use, family history was also be noted in the pre-designed proforma. After follow up of 6 months, all the women were again examined. In suspected cases, sample was taken and send to laboratory for histopathological analysis for the confirmation of recurrence.

SPSS version 20 was used to analyzed the data. Numerical data was presented as mean and SD while categorical data was presented in form of frequencies. Chi-square test was used to compare the both groups.

RESULTS

Mean age was 43.83 ± 9.633 years mean duration of breast cancer was 5.43 ± 1.890 years. Recurrence was noted in 5 (16.67%) patients of MRM group and in conservative surgery group, it was found in 13 (43.33%) patients. Significantly (P = 0.047) higher proportion of recurrence was noted in conservative surgery group as compared to MRM group. (Table 1) Age groups 30-45 years and 46-60 years were made. In 30-45 years group, total 4 (23.53%) patients of study group A (MRM group) and 6 (37.50%) patients of conservative surgery group (B group) reported with recurrence. Difference was not significant with p value 0.465. In age group 46-60 years, recurrence was found in 1 (7.69%) patient and 7 (50%) patients of study group A (MRM group) and study group B (conservative surgery group) respectively. Difference was significant with p value 0.033. (Table 2) Total 2 (22.2%) obese women of MRM group while 3 (50%) obese women of conservative surgery group found with recurrent breast cancer. Difference was not significant with p value 0.329. Recurrence of breast cancer was found in 3 (14.29%) non-obese patients and 10 (41.67%) non-obese patients of MRM group and B (conservative surgery group).

Table 1: Comparison of recurrence rate of breast cancer between the groups

Group	Recurrence		Total	P value
	Yes (%)	No (%)		
A (MRM)	5 (16.67)	25 (83.33)	30	0.047
B (Conservative surgery)	13 (43.33)	17 (56.67)	30	

Table 2: Stratification in relation to age

Group	Recurrence		Total	P value
	Yes (%)	No (%)		
Age group 30-45 years				
A (MRM)	4 (23.53)	13 (76.47)	17 (56.67)	0.465
B (Conservative surgery)	6 (37.50)	10 (62.5)	16 (53.33)	
Age group 46-60 years				
A (MRM)	1 (7.69)	12 (92.31)	13 (43.33)	0.033
B (Conservative surgery)	7 (50)	7 (50)	14 (46.67)	

Recurrence difference between MRM group and conservative surgery group was significant (P = 0.055). (Table 3) In 3-5 years duration of breast cancer group, recurrence was noted in 4 (2353%) patients and 7 (53.85%) patients of MRM group and B

(conservative surgery group), but difference was not significant (P = 0.132). In 6-8 years of breast cancer group, recurrence was seen in 1 (7.69%) patient and 6 (35.29%) patients respectively in MRM group and conservative surgery group, but difference was not significant with p value 0.104. (Table 4) Recurrence of breast cancer was found in 4 (26.67%) primiparas of study group A while in 7 (58.33%) primiparas of study group B. recurrence difference was found insignificant (P = 0.130). In 1 (6.67%) multipara of group A and 6 (33.33%) multiparas of group B found with breast cancer recurrence, but recurrence difference was found insignificant (P = 0.095). (Table 5)

Table 3: Stratification in relation to obesity

Group	Recurrence		Total	P value
	Yes (%)	No (%)		
Obese patients				
A (MRM)	2 (22.22)	7 (77.78)	9 (30)	0.329
B (Conservative surgery)	3 (50)	3 (50)	6 (20)	
Non-obese patients				
A (MRM)	3 (14.29)	18 (85.71)	21 (70)	0.055
B (Conservative surgery)	10 (41.67)	14 (58.33)	24 (80)	

Table 4: Stratification in relation to duration of breast cancer

Group	Recurrence		Total	P value
	Yes (%)	No (%)		
3-5 years of duration of breast cancer				
A (MRM)	4 (23.53)	13 (76.47)	17 (56.67)	0.132
B (Conservative surgery)	7 (53.85)	6 (46.15)	13 (43.33)	
6-8 years of duration of breast cancer				
A (MRM)	1 (7.69)	12 (92.31)	13 (43.33)	0.104
B (Conservative surgery)	6 (35.29)	11 (64.71)	17 (56.67)	

Table 5: Stratification in relation to parity

Group	Recurrence		Total	P value
	Yes (%)	No (%)		
Primiparas				
A (MRM)	4 (26.67)	11 (73.33)	15 (50)	0.130
B (Conservative surgery)	7 (58.33)	5 (41.67)	12 (40)	
Multiparas				
A (MRM)	1 (6.67)	14 (93.33)	15 (50)	0.095
B (Conservative surgery)	6 (33.33)	12 (66.67)	18 (60)	

DISCUSSION

Breast cancer is becoming more common everywhere. All around the world, it is the most typical cause of mortality in women of middle age. In many parts of Pakistan, it is also the cancer that affects the women most frequently.[6] Etiology of breast cancer is very complex, possibly involving the interaction of several causal factors throughout time, including genetic, environmental and hormonal factors.[7] Reducing the likelihood of local recurrence and the danger of metastatic spread are the two guiding principles of early breast cancer treatment.[8] Mastectomy and axillary dissection or clearance are the standard surgical treatments for breast cancer. Although conservative surgery has a slightly greater probability of local recurrence, even when paired with radiotherapy, the long-term outlook for survival is unaffected.[9]

This study was planned with aim to compare the MRM (modified radical mastectomy) with breast conservative surgery in term of recurrence of breast cancer. Mean age was 43.83 ± 9.633 years mean duration of breast cancer was 5.43 ± 1.890 years. Total 5 (16.67%) patients of MRM group found with recurrence while in conservative surgery group, it was found in 13 (43.33%) patients. Significantly (P = 0.047) higher proportion of recurrence was seen in conservative surgery group as compared to MRM group. In one study by Sarsenov et al, recurrence rate of breast cancer was 62.3% after conservative surgery was.[10] Recurrence rate was reported by Mutlak NS et al,[11] as 13% after MRM. Sattaret al[12] in their study found recurrence in 18% women after MRM. In study of Kheradmandet al[13] recurrence was noted in 20.2% women in MRM group. These findings are in agreement with our study. In study of Moslemi et al,[14] recurrence rate of breast cancer after breast conservative surgery was 8% and 6% in MRM group which is contrast with our study.

CONCLUSION

Results of present study revealed that recurrence rate of breast cancer is significantly high after breast conservative surgery as compared to modified radical mastectomy. 3rd and 4th decade of life was common.

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