THE FACTORS IMPACTING DECISION-MAKING FOR BREAST RECONSTRUCTION IN WOMEN FOLLOWING MASTECTOMY: A CROSS-SECTIONAL STUDY

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ABSTRACT

OBJECTIVES

This study aimed to assess the Factors Impacting Decision-Making for Breast Reconstruction in Women Following Mastectomy in Combined Military Hospital, Rawalpindi

METHODOLOGY

This prospective cross-sectional study was conducted at a specialized Breast Clinic in the Combined Military Hospital Rawalpindi from January to June 2023. The sampling technique was non-probability sampling. A total of 56 female patients between the ages of 20-70 years with a histological diagnosis of carcinoma breast and undergoing mastectomy as part of their breast cancer therapy were included in the study. Patients who had metastatic cancer or connective tissue disorder were excluded from the study. After getting informed written consent, data was collected from patients. A semi-structured questionnaire was used as a study tool. Data was presented in the form of tables.

RESULTS

The surgical preference of 56 patients was studied. Only 11(19.6%) patients opted for breast reconstruction. A total of 45(80.4%) patients refused to undergo BR. Several factors affecting the decision not to have BR were identified. They included fear of recurrence in 07 (15.5%) patients, long surgical procedures in 06 (13.3%), lack of concern regarding body image in 11(24.4%), financial issues in 13 (28.8%) patients, unsatisfactory results of breast reconstruction in 8 (17.7%) patients who had lack of trust in plastic surgeon regarding their post reconstruction breast shape.

CONCLUSION

This study laid the conceptual groundwork that factors like fear of recurrence, long surgical procedures, disregard for body image, poverty, and plastic surgeon distrust negatively influence the likelihood of having post-mastectomy breast reconstruction (PMBR).

KEYWORDS: *Breast Reconstruction, Breast Cancer, Mastectomy, Recurrence, Body Image*

INTRODUCTION

Breast cancer is the most common cancer in women and the second most common cancer worldwide. Surgery has been a mainstay and primary modality in the management of breast cancer.[1] As there have been improvements in the early detection and treatment of breast cancer, there have also been improvements in the techniques used for breast reconstruction after mastectomy. Post-mastectomy breast reconstruction (PMBR) is an elective treatment option that is associated with improved psychosocial well-being and quality of life.[2] The cosmetic outcome of breast reconstruction (BR) is superior to mastectomy. Studies have shown that BR is oncologic ally safe as local recurrence incidence following BR is comparable to that after mastectomy.[3] There have been many efforts to improve PMBR utilization. The number of BRs following mastectomy has increased during the last decades in the United States. For example, the ratio of BR has risen from 12% in 1998 to 36% in 2011 but remains constant at approximately 40 %.[4,5] In Korea, BR has increased from 1279 in 2014 to 5728 in 2017 in the last three years.[6] In Canada, the rate of BR has been low, and in China, it has increased from 1.3% to 5.1 % in over a decade.[7] Current literature mostly focuses on the availability of legislative and education efforts to improve the utilization of PMBR by women and their experiences and satisfaction but ignores the perspective of women who declined PMBR and did not opt for it.[8] There remain unexplained factors that negatively influence the women's decision to undergo breast reconstruction, and despite all the available resources and improved plastic surgery techniques and options,

few patients who have had a mastectomy undergo breast reconstruction. In this study, we attempt to fill the gap in the literature by exploring perspectives of women who declined PMBR, and by identifying these barriers to reconstruction, we may improve the clinicians' ability to educate mastectomy patients and ensure effective decision-making appropriately.

METHODOLOGY

A prospective Cross-Sectional study was conducted in a dedicated breast clinic at Rawalpindi Combined Military Hospital. The study was conducted for six months, from January to June 2023. A non-probability sampling technique was used. A total of 56 Women aged 20-70 years with a histological diagnosis of carcinoma breast ranging from stage 0-3 were included in this study, and those patients having metastatic disease and connective tissue disorder were excluded. Their workup was done, and all cases were discussed in multidisciplinary meetings. These patients for whom mastectomy was decided as a safe oncological surgical option were called for a discussion session to know about their preferences about whether or not to undergo post-mastectomy breast reconstruction. Data was collected from these patients after taking well-informed verbal consent on a semi-structured questionnaire.IRB Numbered 428 Combined Military Hospital Rawalpindi was obtained. Data was analyzed in SSPS Version-25. Frequency and Percentage were calculated for qualitative variables, and mean with SD was calculated for quantitative variables. The Chi-square/Fisher exact test was used to assess the association of breast reconstruction decisions with education, residence, and age. The p-value ≤ 0.05 was considered as significant.
Ethical approval No 428, Dated: 01 January, 2023.

RESULTS

Table 1: Demographic Characteristics of The Patients (N=56)

Parameters	Values	
Age in Years	Mean±SD	55.30±11.07
	range	29 - 70
Material Status	Married	52 (92.9%)
	Unmarried	04 (7.1%)
Education	Literate	17 (30.4%)
	Illiterate	39 (69.9%)
Residence	Urban	19 (33.9%)
	Rural	37 (66.1%)

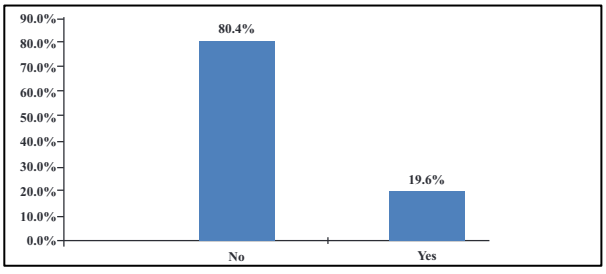

Figure 1: Patient's Preferences Regarding Breast Reconstruction

Table 2: Factors Affecting Women's Decision to Decline Breast Reconstruction

Factors	Frequency (%)
Fear of recurrence	07 (15.5)
Long surgical procedure	06 (13.3)
Lack of concern for body image	11 (24.4)
Financial issues	13 (28.8)
Lack of trust in plastic surgeon	08 (17.7)

Table 3: Association of Breast Reconstruction Decision-Making with Education, Residence, and Age

Parameters	Breast Reconstruction		P-value
	Yes Frequency (%)	No Frequency (%)	
Education			
Literate	11 (100)	06 (13.3)	< 0.001
Illiterate	00	39 (86.7)	
Residence			
Urban	08 (72.7)	11 (24.4)	0.002
Rural	03 (27.3)	34 (75.6)	
Age			
20-40	07 (63.6)	00	< 0.001
41-70	04 (36.4)	45 (100)	

DISCUSSION

Data analysis of the study provided insight into the patient's surgical preferences for breast reconstruction (BR) and the variables that affected their choice. The findings show that just 11(19.6%) of the 56 patients who were studied opted for breast reconstruction, whereas the majority, 45(80.4%) selected not to have BR. Study data showed that the majority of women who declined the option of breast reconstruction after mastectomy were illiterate (86.7%), belonged to rural areas (75.6%), and older in age than those who opted for breast reconstruction. This is per other studies which show that age more than 50 years (partly because of co-morbidities and increased rate of complications), level of education, and regional variations are the most negative predictors of breast reconstruction.[9,1] This study found that women's perceptions about whether BR affected cancer recurrence were an important factor in deciding on BR. 7(15.5%%) patients stated that their fear of recurrence significantly influenced their decision not to get breast reconstruction. A similar study conducted in Singapore found that fear of recurrence was one of the main factors in the decline of BR after mastectomy.[11] This demonstrates the significant influence cancer-related worries can have on individuals' treatment decisions. Another study also found that fear of recurrence was the most important concern of cancer patients, and the false perceptions about cancer recurrence interfered with effective decision-making to undergo BR.[12] Thus, patients must be updated to make informed decisions about their BR without misunderstanding BR surgery. The study found that concerns about the length of the surgical procedure, late recovery, and risks of complications were raised by

6(13.3%) individuals. This concern was also a major criterion for deciding not to undergo BR in other previous studies.[13,14] A significant proportion of patients, 11(24.4%), identified lack of body image concern as a contributing factor. These patients were more concerned about primary cancer treatment and getting rid of it and gave the least priority to breast reconstruction during their medical journey. However, a study conducted in Korea identified the recovery of body image as the most important factor in the decision to have BR after mastectomy in Korean women.[12] In another study conducted in the United States, women chose BR because of their primary concern for appearance and feminity.[15] The study results also showed that BR decisions were affected by the patient's financial resources, consistent with many findings that household income or having private insurance affects the rate of BR. 13(28.8%) patients cited money concerns as a deterrent from choosing breast reconstruction. This was consistent with previous studies conducted in Korea and the United States.[12,16] This emphasizes how crucial it is to remove financial obstacles preventing patients from accessing certain treatment alternatives. 08(17.7%) patients expressed dissatisfaction with the outcomes of breast reconstructions, which they blamed on a lack of faith in the plastic surgeon's capacity to provide the desired post-reconstruction breast form. This suggests that perceived negative experiences with plastic surgery could deter PMBR. This highlights the significance of developing trust and effective communication between patients and healthcare professionals. These findings can be used to implement physician-level interventions that promote trust and consistency. The study showed that BR's decision is difficult for most women and requires significant psychosocial energy over a long time. This study, in particular, found that concern about body image, recurrence considerations, financial support resources, and plastic surgeon trust and confirmation were key criteria in BR decisions. The results of the study suggest that breast surgeons and oncology professionals need to pay attention to these five important criteria when providing education and counseling to help women make their best decision on BR.

LIMITATIONS

Future studies using larger, more diverse samples and a longitudinal approach are needed, which is lacking in this study.

CONCLUSIONS

This study laid the conceptual groundwork that factors like fear of recurrence, long surgical procedures, disregard for body image, poverty, and plastic surgeon distrust negatively influence the likelihood of having PMB in our population. These findings allow us to address this substantial barrier to the effective delivery of patient care.

CONFLICT OF INTEREST: None

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