RESEARCH COMMUNICATION

Immediate Breast Reconstruction after Mastectomy - Why do Women Choose this Option?

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Abstract

Introduction: Mastectomy is an essential but disfiguring operation in cancer treatment. The negative impact on body image can however be prevented by immediate reconstruction. Aim: The aim of this study was to determine the reasons why patients choose to have or not to have immediate breast reconstruction. Methodology: This is a cross sectional descriptive study of breast cancer patients post-mastectomy who had and had not undergone immediate breast reconstruction. The patients were asked a series of questions to ascertain the reasons why they chose or did not choose immediate breast reconstruction. Results: 136 patients in total were interviewed of which 23 had undergone immediate breast reconstruction. 36.8% of the patients had been offered reconstruction. In the non-reconstructed group, the main reason for not having reconstruction were fear of additional surgery. In the group that had reconstruction done, the main reason was to feel whole again. Low on the list were reasons such as trying to improve marital or sexual relations. Conclusion: Only a third of patients undergoing mastectomy were offered immediate reconstruction. In public hospitals in developing countries, limited operating time and availability of plastic surgery services are major barriers to more women being offered the option.

Key Words: Immediate breast reconstruction - mastectomy - breast cancer

Asian Pacific J Cancer Prev, **9**, 409-412

Introduction

Mastectomy is an essential but disfiguring operation in cancer treatment. Although breast conserving surgery has been shown to be equivalent to mastectomy, in most countries in Asia, because of the lack of a screening programme and presentation with a large tumour, the majority of women require mastectomy (Agarwal et al., 2007). Not only is there a significant mortality associated with the disease, but mastectomy produces a significant effect on a woman's body image and self-esteem, and fear of mastectomy has been the reason for many women to resort to alternative therapy (Taib et al., 2007). Body image scores have been shown to be lower for mastectomy patients compared to those who had immediate reconstruction or breast conserving therapy (Fung et al., 2001). This implies that the negative impact of mastectomy on body image can be perhaps prevented by immediate reconstruction.

The available data suggest that breast reconstruction has no impact on the risk of local recurrence or overall prognosis (Sandelin et al., 2004; Petit et al., 2008). The decision to proceed with breast reconstruction following mastectomy is a complicated one, influenced by the clinical situation, as well as patient preference, provider preference, and access to care. The role that each of these factors plays in determining which patients get reconstruction is unclear (Panieri et al., 2003; Christian et al., 2006).

The aim of this study is to determine the reasons why patients choose to have or not to have immediate breast reconstruction.

Materials and Methods

This is a cross sectional descriptive study of breast cancer patients post mastectomy who had and had not undergone immediate breast reconstruction. The study population was derived from breast cancer patients treated by mastectomy in the University Malaya Medical Centre between the year 2000 and 2005. A single interviewer in the breast clinic interviewed a total of 113 patients who had had mastectomy and were not reconstructed as well as 23 patients who had been reconstructed.

The following data was obtained: age at time of mastectomy, race, marital status, profession, presence of health insurance, stage of cancer, adjuvant therapy. Patients were also asked whether they were aware of breast reconstruction prior to the surgery. The non-reconstructed group was asked whether they had been offered

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Table 1. Factors Related to Breast Reconstruction

Characteristic		Breast reconstruction No	Yes	P value
Stage	0	2 (1.8)	0 (0.0)	0.08
	1	28 (24.8)	2 (8.7)	
	2	66 (58.4)	20 (87)	
	3	17 (15.0)	1 (4.3)	
Chemotherapy	No	33 (29.2)	4 (17.4)	0.246
	Yes	80 (70.8)	19 (82.6)	
Radiotherapy	No	53 (46.9)	11 (47.8)	0.936
	Yes	60 (53.1)	12 (52.2)	
Tamoxifen	No	65 (51.5)	12 (52.2)	0.6
	Yes	48 (42.5)	11 (47.8)	
Marital Status	Married	86 (76.1)	19 (82.6)	*0.004
	Single	17 (15.0)	1 (4.3)	
	Divorced	9 (8.0)	0 (0)	
	Widowed	1 (0.9)	3 (13)	
Profession	Housewives	42 (37.2)	14 (60.9)	0.122
	Business	29 (25.7)	6 (26.1)	
	Professional	19 (16.8)	0 (0)	
	Retired	13 (11.5)	1 (4.3)	
	Others	10 (8.8)	2 (8.7)	

reconstruction at the initial consultation. They were then asked a series of questions to ascertain the reasons why they did not choose or did not get reconstructed. They were finally asked whether they would have been interested if they had been offered the option.

The reconstructed group of patients were asked a separate list of questions as to why they had chosen to undergo the procedure. They were then asked if they were satisfied with the results of reconstruction.

Results

A total of 136 patients were interviewed of which 23 had undergone immediate breast reconstruction in the University of Malaya. The mean age of those reconstructed was 41.6 years and those not reconstructed was 51.7 years. There was a mean difference of 10.1 years between the two groups with the reconstructed group of patients being younger. The two groups were similar with regards to stage of disease, and adjuvant use of chemotherapy, radiotherapy and hormone therapy. However the reconstructed group were more likely to be married (p=0.04). There is no significant difference in their profession but there was a larger proportion of housewives in the reconstructed group (Table 1).

From the total number of patients interviewed, 36.8% of the patients had been offered reconstruction. The mean age of those offered reconstruction was 44.6 and those not offered was 53.1. Before consultation, 45.5% of women were not aware of the option.

In the non-reconstructed group, the main reasons for not having reconstruction were fear of additional surgery, followed by fear of complications and not essential for physical/emotional being. Time or the need to travel too far were not important reasons (Table 2). In this group, only 21.2% had been offered reconstruction but chose not to have it done. Of those who were not offered immediate reconstruction, only 16.8% said that they would have been interested.

Table 2. Reasons for Not Having Reconstruction

Fear of additional surgery	77 (68.1)
Fear of complications of surgery	54 (47.8)
Not essential for physical/emotional well-being	51(45.1)
Consider self too old	49 (43.4)
Concern about future cancer	47 (41.6)
Uncertainty about outcome	38 (33.6)
Surgeon against reconstruction	38 (33.6)
Fear of anaesthesia	32 (28.3)
Not impressed with reconstruction seen	29 (25.7)
Lack of information on reconstruction	11 (9.7)
Need for adjuvant therapy	10 (8.8)
Too expensive	5 (4.4)
Feels unnatural	4 (3.5)
Partner did not support reconstruction	2 (2.8)
Need to travel too far	1 (9.0)
Too many work/family commitments	0 (0.0)

Table 3. Reasons for Having Reconstruction

To feel whole again	22 (95.7)
To regain feminity	21 (91.3)
To feel more balanced	21 (91.3)
No clothing limitation	20 (87.0)
To forget about the disease	12 (52.2)
To avoid external prosthesis	10 (43.5)
Improve marital relations	10 (43.5)
Surgeon strongly recommended it	8 (34.8)
Improve sexual relations	0 (0.0)

In the group that had reconstruction done, the main reasons were to feel whole again, to regain feminity, to feel more balanced and to be free to wear anything they wished without feeling self-conscious. Low on the list were reasons such as trying to improve marital relations or sexual relations. They also felt that the surgeon had not pressured them into the option (Table 3). Three volunteered that it was because their husbands encouraged it while two felt that they would not have agreed to mastectomy otherwise.

Overall satisfaction rates were higher for the reconstructed group (87%) compared to the non-reconstructed group (79.6%); however this difference was not statistically significant (p=0.416). A total of 3 women from the reconstructed group were unhappy with the results and regretted having the procedure done. They felt the pain endured post-operatively, both from the donor site and the reconstructed site, meant that it was not worth going through with the reconstruction.

Discussion

The reconstruction rates vary widely in different countries, and in different centres within the same country, from around 5% to over 40% (Christian et al., 2006). The SEER programme in USA reported that the utilization of immediate and early delayed breast reconstruction is low (15%) and is significantly influenced by patients' age, race, and geographic location (Alderman et al., 2003). A study on the effect of ethnicity on immediate reconstruction rates after mastectomy in USA showed that African-American women and Asian women had lower rates of reconstruction compared with white women (Tseng et al., 2004).

A survey on general surgeons in Singapore showed that lack of information and the perception that patients would not want reconstruction were the important reasons for the low referral rates for reconstruction (Lim et al., 2001). A study in Hong Kong showed that Chinese women were more concerned about survival than physical appearance when making the choice for mastectomy, mastectomy and immediate reconstruction and breast conserving surgery (Lam et al., 2005). A nation-wide survey in Japan to study the association between breast surgeons' attitudes toward breast reconstruction and their reconstruction-related information-giving behavior showed that 31.3 percent of surgeons did not give reconstruction-related information at all when explaining breast cancer treatment options (Takahashi et al., 2006).

In Malaysia, the indications for breast reconstruction according to the Clinical Practice Guidelines for management of breast cancer are as follows: Patients less than 55 yrs old, DCIS, LCIS and stage 1 and 2 breast cancer, patients undergoing prophylactic mastectomy. The breast reconstruction rates in the University Malaya Medical Centre varied from year to year depending on the availability of the plastic surgery services, ranging from 1% to 9.2% between 2000 and 2005.

The factors influencing the decision for breast reconstruction remain unclear but it is clear that reconstruction rates vary widely between countries and even between different centres in the same country, implying that the provider factor is of importance and depends on whether women were actually offered the option of reconstruction. Women may not actually be aware that immediate breast reconstruction is an option and surgeons' attitudes affected their reconstruction-related information-giving behaviour (Takahashi et al., 2006). In this study, which is carried out in a dedicated breast surgery unit, only slightly more than a third of women undergoing mastectomy were offered immediate reconstruction. Younger age and being married seems to be the only significant factors between the reconstructed group and the non-reconstructed group, with no significance found in the stage, profession and use of adjuvant therapy.

Age is a consideration in any major surgical undertaking; but some form of reconstruction can be undertaken regardless of age. The reason for age being a factor could be that some surgeons feel that with advancing age, appearance is less of an issue. Certainly the clinical practice guidelines in Malaysia put the age limit for reconstruction as less than 55 years old, but this is certainly arbitrary and not evidence-based. In the busy public hospitals, limited operating time would be a barrier to more women being offered immediate reconstruction.

From this study, the reasons for not opting for reconstruction were mainly fear of surgery, fear of complications of surgery, felt themselves too old and fear of anaesthesia. This is similar to a study by Reaby (1998), where the major reasons were fearing complications and perceiving themselves too old for the procedure, and also that the women felt that it was not essential to their physical or emotional well-being.

The most common reasons in this present study for an individual to elect breast reconstruction was found to be to feel whole again, to regain feminity and to be able to have more freedom in selecting clothing, and to feel more balanced, again similar to the study by Reaby (1998).

From this study, it is clear that women did not choose reconstruction to improve marital and sexual relations, as shown by a other studies (Schain et al., 1985; Elder et al., 2005). Women seem to have realistic expectations and wanted reconstruction for themselves rather than for their partners. Overall the patients were satisfied whichever option they chose, although the reconstructed group showed a non-significant higher rate of satisfaction. This is consistent with studies elsewhere where most women reconstructed demonstrated a high satisfaction rate (Berry et al., 1998; Andrade et al., 2001).

In conclusion, in this study, 36.7% of women requiring a mastectomy were offered reconstruction. In those offered reconstruction, the main reason for not choosing the option was fear of more surgery and its complications. The reasons for choosing reconstruction were to feel whole again and to be comfortable in clothing.. Women did not choose reconstruction for unrealistic reasons like improving their marriage or sexual relations. The mean age of those reconstructed was 10.1 years younger than those not reconstructed. Race, stage of the disease, chemotherapy, radiotherapy, tamoxifen, and profession did not have any influence on the decision for reconstruction. In the public hospitals in most countries of Asia, limited operating time, awareness, and availability of plastic surgery services would be a major barrier to more women being offered the option.

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