

## **Breast cancer – patient choice of treatment: preliminary communication<sup>1</sup>**

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**Summary:** Forty patients who have undergone treatment for breast cancer (mastectomy or lumpectomy plus radiotherapy) were assessed, both preoperatively and at intervals up to one year following surgery, using tests of anxiety, depression, body satisfaction, marital adjustment, self-esteem, sociability and life change. The women were also interviewed to assess degree of concern about the disease, appearance and treatment. Wherever appropriate, patients were given a choice of treatment. Very little adverse psychosocial reaction has been found. It would appear that this is largely because most patients could opt for treatment which resulted in minimal disfigurement.

### **Introduction**

The traditional treatment for early breast cancer has been mastectomy. However, there is growing concern about the need to remove the whole breast (Margolese 1983). Evidence so far accumulated suggests that more conservative surgery may prove equally as adequate in many cases (e.g. Mustakallio 1972).

At the present time it would seem, therefore, that there exists a population of women with breast cancer for whom conservative treatment (lumpectomy followed by radiotherapy) is comparable to mastectomy in terms of the physical well-being of the patient. Given this, the question then arises of which operation is best in terms of the psychological adjustment of the woman to the disease and the effects of treatment? Related to this question is the issue of who should choose treatment, the patient or the surgeon?

There are reports in the literature of psychological consequences of breast cancer treatment. Depression and anxiety are the most prevalent responses (e.g. Goldsmith & Alday 1971, Lee & Maguire 1975), often accompanied by a wealth of psychosocial problems related to adapting to a different body image (e.g. Ray 1977). So, for example, women may experience fear of loss of femininity, may withdraw socially, give up employment, experience marital breakdown, and so on.

However, it is notable that such adverse effects are reported for mastectomy patients rather than those undergoing conservative surgery. This reflects, of course, the preponderance of the former treatment for breast cancer during the last 30 years. Although there have been trials comparing the success (in terms of rate of local recurrence of the cancer and overall survival rate) of various forms of treatment (e.g. Halnan 1979), concomitant psychological studies are rare. Where they do exist (e.g. Sanger & Reznikoff 1981), psychological testing is limited and patient choice of treatment is not an issue which is fully investigated. The present study was an attempt to remedy this by providing a structured comparison of the psychological changes which occur as a function of mastectomy or lumpectomy plus radiotherapy. In addition, wherever possible patients were given a choice of treatment. With those cases where conservative surgery was considered inappropriate on medical grounds, breast reconstruction was offered following the mastectomy (whenever technically feasible). When a choice was given to

<sup>1</sup>Accepted 11 October 1984

the patient, and she found it difficult to decide between treatments, a clinical psychologist was able to guide her through the decision-making process so that she might rationally consider all the factors which would help her choose the best operation for her.

### Methods

The project so far has been concerned with 40 women who have undergone surgery for breast cancer. Patients were from a wide range of social class. Ages ranged from 31 to 70 years. A smaller group of 10 women who have undergone surgery for benign breast lumps have acted as a control group; these women have tended to be younger (20–40 years). In addition, complete psychological testing has been conducted on 200 women who have presented at the clinic with breast problems which have proved to be non-malignant.

The Liverpool unit is participating in the CRC Breast Conservation Trial. Patients who fulfilled the entry criteria for the trial were offered entry into the trial (which entailed random allocation to mastectomy or lumpectomy plus radiotherapy treatment) or the alternative of staying out of the trial and choosing themselves between the two treatments. Those patients for whom mastectomy was considered necessary on medical grounds had no choice of treatment, but were offered breast reconstruction in most cases.

Psychological testing was conducted on a number of occasions: when women first presented at clinic for medical assessment; the day before their operation; then two days, three months and one year following surgery. The tests which formed the standard battery (completed by the patient herself in a time period, usually, of about 30 minutes) were:

- (1) Measures of depression and anxiety: the Leeds scales (Snaith *et al.* 1977) and the Spielberger State-Trait Anxiety Inventory (Spielberger *et al.* 1970).
- (2) Body satisfaction scales. These were designed specifically for the study.
- (3) Social adaptability measures (Watson & Friend 1969).
- (4) The Locke & Wallace (1959) Marital Adjustment Test.
- (5) Self-esteem measures (Dohrenwend *et al.* 1980).
- (6) Frequency and severity of life events occurring in the year prior to testing (Holmes & Rahe 1967).

This batch was given prior to the operation (in nearly all cases the day before surgery) and at three months and one year following this. In addition, measures of depression and anxiety were obtained two days following surgery. At three months and at one year following surgery patients have also been given an 'adjustment' questionnaire which contains direct questions about life after the operation: three areas are dealt with, general activity level, relationships with other people, and thoughts about health and general well-being.

Patients were interviewed the day before surgery, and three broad areas were discussed: (1) the fact of the presence of the disease, that the patient has cancer; (2) effects of the operation on physical appearance, and the importance of appearance to the woman's self-esteem; (3) thoughts about being in hospital, the forthcoming operation and views on the whole medical scene. Most topics the women wished to discuss could be subsumed under one of the three main areas. At the end of the interview each patient was asked to rate degree of concern (on a scale between 1 and 10) about each of the three areas.

For those patients who found it difficult to choose between treatments, some of the interview was spent in leading them through a simple decision analysis procedure. The patient was asked to think of all possible outcomes for one treatment (e.g. mastectomy). She was then asked to say how likely each outcome was (subjective probability was therefore assessed on a scale between 1 and 10). The value or importance of each outcome was then elicited (on a scale between 1 and 100) and these scores formed the utilities of each outcome. The subjective probability was multiplied by the utility for each outcome, and the resulting scores formed the basis for further discussion. A similar procedure was used for the other treatment. It should be noted that no technical terminology was used, and the whole procedure was presented to patients very much in the form of a game played to help them sort out their feelings in a rational way.

Women were also interviewed two days following surgery. This interview was largely unstructured and enabled the patient to voice her feelings about her experiences of the day of surgery and any problems she may have been experiencing since then.

## **Results**

There are two notable findings from the study so far. The first is that there is very little difference between groups in terms of most of the psychological measures taken. All patients appeared somewhat anxious when they discovered they had cancer. Scores for anxiety approximated the norms for general surgical patients. Such anxiety is, of course, only to be expected. However, the degree of anxiety was generally not severe, and the profound anxiety and depression reported in other studies has not been found. Scores on the tests of depression have generally approximated scores for a normal population having to face a 'depressing event' rather than the norms for hospitalized or psychotically-depressed patients. Follow-up data have not shown prolonged severe depressive illness. On other psychological measures (self-esteem, body image, marital satisfaction, sociability, life events) average scores generally have not varied significantly from those of a normal population.

The second notable finding is that there is a very significant difference ( $P < 0.001$ ) between groups in the rating of concern about appearance. This rating is one of the three ratings elicited in the preoperation interview (as described earlier). A rating of 0 indicates no concern at all, and 10 indicates maximum possible concern. Those women who chose conservative surgery tended to rate concern over appearance as 7 or above. Similar scores were obtained for women for whom mastectomy was considered the only viable treatment, but who accepted the offer of breast reconstruction. For those patients who chose to enter the CRC Trial, or who chose mastectomy, or who did not take up the offer of breast reconstruction following mastectomy, concern about appearance was rated as 4 or less. There was no significant difference between groups on ratings of the two other areas—concern about the disease and concern about hospitalization.

## **Discussion**

Results so far obtained from the study suggest that the patient's concern about appearance could be the most important factor in determining optimal treatment. It was obvious from the interviews that, for a certain population of women, concern over appearance of the breasts and maintenance of a complete body image was of paramount importance. The offer of a lumpectomy, or reconstruction where mastectomy was necessary, led to a considerable expression of relief. Those women who chose the less disfiguring option said they would have been extremely distressed if they had lost a breast. It is not unlikely to suppose, therefore, that if no choice had been given and a mastectomy performed in all cases, many of these women would have reacted by entering the profoundly depressed state so often reported in the literature.

Many of the women who chose mastectomy reported that they did so because of a number of factors. Self-esteem was not dependent upon maintenance of a complete body image for these patients. Women often expressed the view that the affected breast was 'foreign' as it contained disease, and they were only too happy to be rid of it. Sometimes the wish to avoid radiotherapy was much stronger than the urge to keep the breast, and so mastectomy was chosen. The feeling of personal control over her own fate was often expressed as important by the patient.

Of course, as can perhaps be expected, some patients were confused and bewildered that they were given a choice of treatment. Giving these women information about their disease and about alternative treatments was often not enough to enable them to decide. Further discussion was necessary in order to establish the patient's personal needs and to consider how the alternative treatments might meet these needs.

Results so far suggest that the best predictor of good psychological adjustment to breast cancer treatment is to establish, before surgery, the importance to the woman of maintaining a complete body image. Treatment, preferably with consultation with the patient herself,

can then be adjusted accordingly. Thus disfigurement can be avoided wherever this is of importance to the psychological well-being of the patient.

*Acknowledgments:* All authors are members of the University of Liverpool and their research is funded by the Cancer Research Campaign.

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