

greater flexibility in the delivery of screening services, allowing, for example, the employment of ophthalmic medical practitioners in health centres or general practices. Undoubtedly there are also some ophthalmic opticians who find the clinical aspects of their work more interesting than the commercial and who would be willing to devote some of their time to ophthalmic screening within a general medical practice. Given the limited amount of undergraduate and postgraduate training in ophthalmology that most doctors receive, the complexity of the specialty and its dependence on expensive diagnostic equipment, and the general practitioner's commitments to many other aspects of medicine, it seems unlikely that most general practitioners would be able to take on this role.

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Mastectomy or conservation: the patient's choice

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Abstract

Study objective—To determine whether, if given the choice, patients with breast cancer would prefer mastectomy or conservation treatment, neither treatment having been shown to be preferable.

Design—Non-randomised case series with 28 patients interviewed after two years and all followed up.

Setting—Secondary care referral centre.

Patients—153 women, aged less than 65, with T₁, T₂, N₁, and N₀ tumours of the breast given the choice of treatment (that is, all eligible patients from December 1979).

Interventions—Patients were asked, after information and counselling, which treatment they would prefer. The chosen treatment was given without further question. Mastectomy included node sampling and local radiotherapy if indicated. Conservation treatment comprised excision of the lump, external radiotherapy, and iridium wire implant to tumour bed.

Main results—Conservation treatment was chosen by 54 women and mastectomy by 99. Reasons for preferring mastectomy included desire for rapid treatment for domestic or employment reasons and fear of possibility of future mastectomy. Only two of the sample interviewed regretted their choice. During limited follow up no advantages to either form of treatment were seen in terms of recurrence or survival.

Conclusions—Patients with breast cancer are capable of choosing treatment and should play a part in deciding which treatment to have. They do not automatically choose to retain the breast.

Introduction

Mastectomy, used for many years as the primary treatment of breast cancer, has recently come under attack in the media and from some members of the medical profession. Its critics advocate conservation treatment, which entails minimal surgery in the form of wide local excision of the primary lesion and radical external beam radiotherapy to the breast and regional

lymph nodes and, generally, a booster dose to the tumour bed.^{1,2} As this treatment offers a good cosmetic result and has not been shown to be less effective than mastectomy its proponents say that it is better than a mutilating operation. Conservation is not synonymous with conservative surgery, in which the surgery is usually a segmental or partial mastectomy with or without adjuvant radiotherapy and a good cosmetic result is not usually possible.

Whether conservation treatment is acceptable to women with breast cancer or indeed is demanded by them, as suggested by its supporters, and whether it results in the same rate of cure as mastectomy are not known. It is not a new concept but became more common after a report in 1980 of a seven year follow up of patients who had received it in France.³ That study, which was not a controlled trial, showed that for small tumours conservation treatment gave results almost identical with those achieved by mastectomy. Larger tumours, however, had an unacceptably high rate of local recurrence. A proper trial comparing mastectomy with conservation has still not been done. The trial of Fischer *et al*,⁴ which is much quoted, studied conservative surgery comprising segmental mastectomy with axillary dissection plus radiotherapy for nodal disease and adjuvant chemotherapy.

A few patients had conservation treatment in this hospital in the 1960s and early 1970s, and by 1979 we made it routinely available to women attending the breast clinic. We wanted to compare the results of the treatments, but we were reluctant to use random allocation to conservation or mastectomy because we thought that this might distress the patients and thereby increase the currently low psychological morbidity in the unit.⁵ These reservations were later justified when an attempt by the Medical Research Council's clinical research centre to do just such a trial failed for these reasons.⁶ If, as Pierguin *et al* said, the two treatments are equally effective for small tumours³ we could not advise women that one was preferable. We therefore offered the two alternatives and asked women to select their treatment. We report the outcome of this policy over the past nine years in terms of both the women's preferences and the results of the treatments. The first 17 patients offered this choice

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were studied in depth by a clinical psychologist to assess the acceptability of treating them in this way.⁷

Patients and methods

Since December 1979 all patients under the age of 65 who have T₁, T₂, N₁, and N₀ tumours of the breast, proved whenever possible by fine needle aspiration cytology, have been informed of the diagnosis and given the option of treatment by mastectomy or conservation. Conservation treatment is described in detail by the doctor, though less is said about mastectomy as most patients are aware of this treatment. As surgery is required in both options an early date for admission is arranged. On admission the women are counselled again and asked if they have any immediate preference for treatment. To help them decide and to provide standardised information two 10 minute tape-slide presentations, one for each treatment, are available for the patient and her partner or other friend.⁸

A consent form for the operation is offered to the patient only after she has expressed her preference and seen the appropriate tape-slide programme without changing her mind or has made a settled choice after seeing both programmes. There is no absolute time scale for this process, but patients are admitted to the unit 48 hours before the planned date of surgery. Once the patient has made her choice it is confirmed by the house surgeon and the nursing staff and finally by the surgeon on the morning of the operation. The operation can be postponed if the patient is still unsure of her choice.

A simple mastectomy with node sampling or a wide local excision of the primary tumour is performed. In both cases the scar is planned to give the best possible cosmetic result. The patients having conservation treatment receive 50 Gy external beam radiotherapy to the breast in 25 fractions and a 30 Gy iridium wire implant to the tumour bed. Patients having a mastectomy who have nodal disease receive adjuvant radiotherapy to the chest wall and the lymph node drainage areas. No adjuvant therapy—that is, chemotherapy or hormonal treatment—is currently used.

All patients are followed up in the combined breast clinic (the surgeon, radiotherapist, and medical oncologist are present) six weeks after completing their treatment, every three months for the first two years, every six months for the next three years, and then yearly. To assess the patients' attitudes to the management policy 28 were interviewed by one of us (AH) more than two years after they had made their choice of treatment.

Results

During the nine years of study (1979-87 inclusive) 153 women who would normally have been treated by mastectomy were given the option of conservation; 54 chose this option and 99 preferred mastectomy. No patient refused to decide for herself. Two changed their minds and finally settled for mastectomy. The mean age, age range, menopausal state, and size of tumour in the two groups were similar (table). The patients having mastectomy included 18 with lobular

carcinomas, compared with only four in the group having conservation treatment.

Of the 28 women interviewed more than two years after they had chosen their treatment, 24 said that it had not been a difficult decision to make and that they had been motivated towards one treatment; four said that it had been difficult and two of these, in retrospect, were unhappy about having had to choose. Patients who had chosen conservation had not had a main reason for this choice, and the many reasons given are difficult to classify. Patients who had chosen mastectomy had done so mainly for two reasons: firstly, they disliked the thought that conservation treatment would last for five to six weeks because this would disrupt their domestic or working lives or because they wanted a quicker solution to the problems; and, secondly, they were unhappy that there was no guarantee that they would not need a mastectomy later and they could not live with this uncertainty. Women who had accepted conservation reluctantly at the wish of their partner continued to be anxious about their breast. This anxiety had been relieved in six patients who had subsequently had a mastectomy even though they were aware that this had been for recurrent disease. Two patients with in situ lesions, which can be cured by mastectomy, had not been prepared to accept the unknown risk of conservation treatment. We are aware of only one patient out of the 153 who regretted her decision to have a mastectomy. This woman had been motivated at the time by the need to get back to her teaching post and caring for her family.

Because the median survival is still short we do not want to give detailed figures, but the five year survival was similar in the two treatment groups. Survival was comparable with that found in the clinical research centre's multicentre trial³ and in 86 patients treated by mastectomy in this unit by one surgeon before the introduction of the alternative treatment. Mortality in patients with lobular cancer may, however, be higher in patients who have conservation treatment (table).

Discussion

Most women treated in this unit for primary breast cancer welcomed the opportunity to choose between mastectomy and conservation treatment. Initially many expressed surprise at being asked to take part in selecting their treatment, but they were quite capable of doing so. No one refused to participate in making this choice, and, though some initially expected the decision to be taken by the doctor, none failed to make a decision given adequate information and time for discussion.

In spite of the apparent cosmetic and psychological advantages of retaining the breast, most patients selected mastectomy. The reasons for this became clear at the follow up interview. Most women came to their first appointment at the breast clinic already convinced that they had breast cancer, and presumably they had already considered the possibility of mastectomy. When their suspicions were confirmed one third immediately said that they would have a mastectomy and one third that they would have anything but a mastectomy; the reasons for not choosing mastectomy are so varied that a more extensive study is needed to explore and classify them. The remaining third of the women, who tended to be those who had not known that there could be an alternative treatment, were the patients who required most time and discussion; most eventually chose mastectomy, either because of domestic or employment commitments or because they could not face the possibility that they might still have to have a mastectomy in the future. We eventually stopped offering conservation treatment to patients with lobular carcinoma as its risk

Details of 153 women who chose mastectomy or conservation treatment at Newcastle General Hospital, 1979-87

	Mastectomy	Conservation treatment
No of women	99	54
Mean age (range) (years)	49.8 (27-65)	44.7 (27-65)
No of postmenopausal women	31	11
Mean tumour size (cm)	2.4	2.1
No with lobular cancer (deaths)	18 (2)	4 (2)

of local recurrence is three times that of ductal carcinoma.

The determination of those who selected mastectomy is interesting. In answer to the possible criticism that we may have influenced the patients to choose this treatment, we used a technique that biased the discussion towards conservation, which in the end was selected by fewer women. Bias towards conservation was also often applied by relatives and friends. Well meaning relatives may find it difficult to believe that mastectomy is genuinely the patient's choice. After a television news programme we received 20 telephone calls from relatives demanding to know why we were not offering conservation to one of our patients, at whose choice mastectomy was due to be carried out the next morning. In the light of this we offered to postpone the operation but the patient asked us not to.

We have now started a two year prospective study of the impact of choice and its possible effects on anxiety and depression. We agree with the findings of a small study from Southampton that choice does not seem to cause harm,¹⁰ but we found that only a third of patients took up the offer of conservation treatment.

We conclude that women attending the breast clinic in this hospital are quite capable of playing a part in selecting their own primary treatment for operable breast cancer. Possibly patients with lobular cancers, which have a high rate of local recurrence, or in situ lesions, which are definitely cured by mastectomy, should not be offered conservation treatment. With the advent of screening programmes this poses a dilemma:

Should these patients be advised to have a mastectomy as it may offer a better chance of cure?

Overall, with two thirds of women choosing mastectomy and with mastectomy the best treatment for women with lobular lesions and cancers in situ it seems that less than 20% of women with early breast cancer will be suitable for conservation treatment. From the patients' point of view centres where conservation is available and there is enthusiasm for it should offer it as an alternative. Equally, they should make clear to the patients that a mastectomy is still an available option.

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Relaxation and imagery in the treatment of breast cancer

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Abstract

Objective—To see whether stress could be alleviated in patients being treated for early breast cancer.

Design—Controlled randomised trial lasting six weeks.

Setting—Outpatient radiotherapy department in a teaching hospital.

Patients—One hundred fifty four women with breast cancer stage I or II after first session of six week course of radiotherapy, of whom 15 dropped out before end of study.

Intervention—Patients saw one of two researchers once a week for six weeks. Controls were encouraged to talk about themselves; relaxation group was taught concentration on individual muscle groups; relaxation and imagery group was also taught to imagine peaceful scene of own choice to enhance relaxation. Relaxation and relaxation plus imagery groups were given tape recording repeating instructions and told to practise at least 15 minutes a day.

End point—Improvement of mood and of depression and anxiety on self rating scales.

Measurements and main results—Initial scores for profile of mood states and Leeds general scales for depression and anxiety were the same in all groups. At six weeks total mood disturbance score was significantly less in the intervention groups, women in the combined intervention group being more relaxed than those receiving relaxation training only; mood in the control group was worse. Women aged 55 and over benefited most. There was no difference in Leeds scores among the groups.

Conclusions—Patients with early breast cancer benefit from relaxation training.

Introduction

In an attempt to understand more about the aetiology of cancer several studies have investigated whether life stresses (often "loss" events) are among the psychological risk factors for the disease. Though some significant links have been reported,^{1,3} other studies have failed to show this relation.^{4,5} Doubts have been cast on the validity of linking life events and cancer, as the variations in growth rates of tumours make it difficult to establish whether any particular stressful event antedates the "biological" onset of cancer.^{6,8}

As yet there appears to be no consistent evidence of a causal relation between life stresses and cancer, but it seems reasonable to suppose that the procedures of being diagnosed and treated for cancer are themselves stressful.^{9,11} Maguire suggested that "most of the mood disturbance which occurs in patients with cancer probably results from their inability to cope psychologically with the stresses caused by their disease and treatments. They face the threats that they may lose their health, role, and life. They also have to live with the uncertainty as to whether and when these losses will occur."¹²

Patel and coworkers have shown that relaxation treatment reduces stress in hypertension.^{13,14} Fleming found that relaxation treatment offered to patients with far advanced cancer seemed to benefit most those who were seen on an individual basis.¹⁵ Another study of

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