Psychological factors in breast cancer

Two way traffic between the mind and the body

Conservative surgery for early breast cancer is now commonplace, a development that at least partly reflects greater appreciation of the psychological sequelae of radical treatment. Patients receiving cytotoxic drugs, especially those receiving combination treatments, also constitute a group at high risk of psychological symptoms. It is now clear, however, that significant psychiatric morbidity is not confined to subgroups of patients who experience unpleasant side effects of treatment or those with advanced disease. A recent study found that one in four women had significant psychological symptoms 12 months after mastectomy, the commonest complaints being depression, anxiety, and sexual dysfunction. Increased risk is associated with poor marital relationships, unsupportive social networks, recent adverse life events, and previous psychiatric illness.

The recognition of such high rates of psychiatric morbidity prompted a King's Fund consensus conference on the treatment of early breast cancer to recommend that a psychiatrist should be attached to each district team. An audit of such a service found that referral rates were low (less than 2% of patients attending clinics) when compared with the presumed prevalence of psychiatric disorders among these patients. Four out of five patients referred were diagnosed as suffering psychological reactions to their illness, and half of these were of sufficient severity and duration to be classified as psychiatric illnesses. Many of those experiencing psychological reactions, however, responded well to brief interventions, typically one or two counselling sessions.

The liaison psychiatry service in most hospitals will not be able to offer individual counselling services to all such patients. The most appropriate role for the psychiatrist will be to provide training and supervision of medical and nursing staff to help them detect psychiatric morbidity and deal sensitively and effectively with those who experience transient reactions. Direct psychiatric input is indicated for patients who experience severe or prolonged symptoms and those who have coincidental psychiatric disorder.

Most studies of psychological interventions in patients with cancer, including relaxation training and individual or group psychotherapy, show beneficial effects on depression and anxiety. These treatments also lead to improvements in certain physical symptoms including pain, although some studies have reported changes that are either temporary or confined only to the most distressed patients. Interpreting results is made difficult by inadequate descriptions of the treatments used and differences between the types of psychological intervention. A structured and well described method of short term individual psychotherapy for patients with cancer, combining cognitive and behavioural strategies, has been developed at the Royal Marsden Hospital, and the results of its application in studies are awaited with interest.

A burgeoning interest in treating psychiatric morbidity related to cancer has been paralleled by a dawning realisation that psychological factors may significantly influence the onset and course of the organic illness. Several recent studies suggest that cancer may be susceptible to psychological influence. Certain personality traits, such as a tendency to suppress emotion, especially anger, and to respond to stress by using a repressive coping style, have been found to be commoner in patients with cancer.

The progression of cancer has also been linked to certain personality characteristics, but others have disputed or failed to replicate these findings. Greer and his colleagues have defined five coping styles in people with cancer and have reported better outcome in patients with non-metastatic breast cancer who try to play an active part in recovery and lead as normal a life as possible ("fighting spirit") and in those who assume an attitude of denial and minimise the threat of their illness. The patients lived longer and were more likely to be free of recurrence at five, 10, and 15 years than those who were anxiously preoccupied or fatalistic or felt hopeless. Surprisingly, such characteristics were found to be more important prognostically than several biological indices of tumour severity. These results are based on the outcome in only 62 patients, and the findings clearly need to be replicated in larger studies. These workers sought biological explanations of their findings and found that patients with different coping styles had significant differences in immunoglobulin profiles after surgery.

How important is psychological stress in the onset and course of cancer? Research is beset by considerable methodological problems, such as the difficulty of assessing the magnitude and significance of life events and the problem of comparing patients with different cancers. Although some studies have failed to show a relation between stressful events and the onset of cancer, most studies have shown at least a weak association in children and adults. A recent study provides evidence that life events have clinically significant effects on the outcome of breast cancer. This retrospective trial compared patients whose disease had relapsed with a control group who remained in remission after surgical
treatment. An association was found between severe life events or difficulties and relapse. Further prospective studies are needed, controlling for intrapsychic factors—such as coping styles and mood disturbance.

Despite methodological difficulties and inconsistent results much of the work so far described points to a complex relation events or difficulties and relapse. The results of a trial of psychotherapy in patients with advanced breast cancer by Spiegel and his colleagues in the United States have excited interest. The psychotherapy consisted of 90 minute group sessions each week that were led by trained therapists, one of whom had breast cancer in remission. The sessions concentrated on airing of feelings—facilitating the expression of grief, establishing emotional bonds between sufferers, and methods of coping with cancer. After 10 years' follow up the patients who had had therapy had lived twice as long as the controls (37 months compared with 19 months). The study had some problems, however, which included differences between treatment groups and lack of information about possible confounding factors—such as social network, life events, and personality factors. Also puzzling is why the effect of treatment should have become obvious only eight months after the end of psychotherapy. This was a small study and the results need cautious interpretation. Problems also arise in interpreting non-randomised studies of the effects of psychological or complementary therapies on disease process, which are biased by confounding physical and psychological differences between self selected samples.

Further progress will depend on a better understanding of the interaction between the mind and the body. A relation between psychological factors and cancer could be mediated through behavioural factors such as smoking or diet or more directly through biological correlates of certain emotional states. In breast cancer several worthwhile and testable hypotheses have emerged. A relation between tumour oestrogen and progesterone status and psychosocial adjustment has recently been reported. Other possibilities include a relation between mood and concentrations of immunoglobulins, natural killer cells, and prolactin.

Whatever the nature of these interactions, doctors should be aware of the high rate of psychiatric morbidity in patients with breast cancer. A few will need psychiatric treatment, but others will benefit from other psychological interventions. The suggestion that the course of the cancer itself will be affected by such interventions is tantalising, but the evidence remains inconclusive. Over emphasising a relation might lead to self blame by patients whose disease relapses.

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Health research in developing countries

Each should have a programme of essential national health research

Dr Lamin Kurubally obtained a master's degree in public health from the United States. He returned home to West Africa wanting to carry out epidemiological research in the pursuit of improved public health. A group of villagers approached him because of their concern over the amount of mental illness in young people. He wanted to study this but had no resources. His grant proposal was turned down because his review of the literature was poor and his budget for capital items was too large. The only library to which he had access had only a few out of date textbooks, the one departmental computer had no uninterruptible power supply so was constantly damaged by electrical fluctuations, and the photocopier was broken and the nearest technician was 600 kilometres away. The government wanted him to work on controlling diarrhoea, which an international agency was willing to fund. His government salary was inadequate to support his family, so he started private family practice in the evenings to supplement it.

This fiction contains many of the elements that face all researchers in developing countries—problems on which a commission on health research for development has recently reported. The commission comprised a group of eminent