



Evaluation of healing by gentle touch in 35 clients with cancer

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KEYWORDS

Healing;
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functioning;
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Summary An uncontrolled, preliminary evaluation of healing by gentle touch in clients with cancer was carried out at The Centre for Complementary Care in Eskdale, Cumbria. All clients attending The Centre between 1995 and 2001 were invited to participate. Data were collected from 35 clients with cancer. Outcome measures included pre- to post-treatment changes in physical and psychological functioning. Assessments were made using a questionnaire with visual analogue scales for subjective rating of symptoms and the EuroQoL (EQ-5D), a generic state of health measure.

Wilcoxon Signed Ranks tests showed statistically significant improvements in psychological and physical functioning, with positive effects on quality of life. The most pronounced improvements were seen in ratings for stress and relaxation, severe pain/discomfort, and depression/anxiety, particularly in those with the most severe symptoms on entry. The study found no adverse effects resulting from the treatment. These findings indicate that healing is a safe and effective adjunct to conventional medical treatment with the potential to ameliorate some of the more stressful aspects of cancer, including those inherent in current cancer treatment strategies. Rigorous evaluation of this modality by prospective, randomised, controlled trial is strongly warranted, as are investigations into its potential for use in palliative care.

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Zusammenfassung Am Zentrum für Komplementäre Krankenpflege (Center for Complementary Care) in Eskdale (Cumbria, England) wurde an Krebspatienten eine unkontrollierte Vorstudie über Heilung durch sanfte Berührung durchgeführt. Alle Patienten, die das Zentrum zwischen 1995 und 2001 aufsuchten, wurden zur Teilnahme am Versuch eingeladen. Von 35 Krebspatienten wurden Daten genommen. Vor und nach den Behandlungen verglich man mögliche Veränderungen im psychologischen wie im psychologischen Bereich. Zur subjektiven Einschätzung der Symptome verwendete man einen Fragebogen mit visuellen analogen Messskalen, zur Messung des allgemeinen Gesundheitszustandes wurde der EuroQoL (EQ-5D) herangezogen.

Wilcoxon Signed Ranks Tests wiesen signifikante Verbesserungen sowohl psychischer als auch physischer Funktionen mit positiven Auswirkungen auf die

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allgemeine Lebensqualität nach. Die augenfälligsten Verbesserungen traten vor allem bei den Personen mit den intensivsten Anfangssymptomen in der Bewertung von Stress bzw. Entspannung, von Beschwerden und Schmerzen sowie von Angst und Depression ein. Die Untersuchung konnte keinerlei negative Auswirkungen der Behandlungen feststellen.

Diese Ergebnisse weisen darauf hin, dass die angewendete Heilmethode eine sichere und effektive Ergänzung zur schulmedizinischen Behandlung darstellt. Sie trägt das Potential in sich, zur Linderung einiger der besonders belastenden Aspekte einer Krebserkrankung beizutragen, wie sie unter anderem den gegenwärtigen Verfahren zur Behandlung dieser Krankheit anhaften. Eine gründliche Erforschung dieser Möglichkeiten durch zukünftige randomisierte kontrollierte Versuche ist mehr als gerechtfertigt. Dies gilt ebenso für die Untersuchung des Einsatzes der Heilmethode in der palliativen Versorgung.

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Introduction

There is increasing interest in the use of complementary therapies as adjuncts to cancer treatment. A 1998 survey revealed that 70% of oncology departments in England and Wales were offering one or more forms of complementary therapy (White, 1998) and the body of methodologically sound research into their effectiveness is beginning to expand. The quality of life of patients with cancer is frequently impaired by treatment of the disease as well as by the disease itself (Knobf, 1990; Payne, 1992) and by inadequately controlled pain (Cleeland et al., 1994). Cancer chemotherapy has increased the life expectancy of people with diverse malignancies, but it frequently causes severe and debilitating side effects such as nausea and vomiting (Montgomery and Bovbjerg, 2000). The adverse psychological effects of both cancer diagnosis and treatment can be extremely persistent. A study by Fallowfield et al. (1990) found that many patients were still anxious or depressed 12 months after breast cancer surgery. A non-invasive complementary therapy might, therefore, have much to offer in terms of ameliorating the adverse effects of both the disease and its treatment.

Although several other touch therapies involving attentive care have been shown to reduce pain perception and anxiety in cancer patients (Ferrell-Torry and Glick, 1993), and in other patients experiencing pain (Wirth et al., 1993), variations in treatment and research methodology limit direct comparative evaluation. In a general study of a variety of adjuvant complementary therapies (including healing, visualisation and homoeopathy) used by patients with cancer, subjects reported feeling calmer and more able to cope with their disease (Downer et al., 1994). A limited number also experienced nausea reduction, increased

energy and less difficulty in breathing, but there were no observable changes in pain intensity.

The Centre for Complementary Care in Eskdale, Cumbria (The Centre) has offered healing (MacManaway and Turcan, 1983) treatment to both medically referred and self-referred clients in West Cumbria for 12 years. During this time, The Centre has gained a sound reputation for improving the health and quality of life of its clients (Luff and Thomas, 1999; Stevens and Leathard, 2001). A study by the North Cumbria Health Authority (Tiplady, 1996) showed that treatment at The Centre was effective in improving physical and psychological functioning in the majority of 110 subjects with various ailments, and might, therefore, contribute to potential cost savings in GP and Consultant time and reduction in medication requirements.

Since 1995/6, The Centre has collected data from all clients willing to complete self-assessment questionnaires before and after treatment. Analysis of data from 300 clients who received four treatment sessions (unpublished observations) has demonstrated statistically significant improvements in both psychological and physical functioning in a high proportion of subjects with a wide range of long-term, intractable conditions, supporting the preliminary conclusions of Tiplady (1996). The present paper appraises in more detail the findings in a subgroup of 35 of these clients who had cancer.

The Centre's principal treatment modality is healing by gentle touch, resembling that described by MacManaway and Turcan (1983). It is a non-invasive, non-condition-specific intervention involving the gentle placing of hands on various parts of the body, giving particular attention to areas in which pain, discomfort or other problems have been experienced. The term healing is used as a concise way of labeling the treatment. How it

works is not known, but it appears to trigger or enhance physiological healing processes in the recipient of this form of attentive care (Dixon, 1998). This approach to healing is complementary to medical procedures, a feature which is reflected by the number of referrals received from General Practitioners (GPs), Consultants and MacMillan and District Nurses in the North Cumbria Health Authority area.

The subjects of this study were recruited from those encountered during routine clinical practice at The Centre, which treats all comers, regardless of ability to pay. Participants therefore reflect the demographic characteristics of the local community and since the area is one of rural and urban social deprivation, poor health, high unemployment and poverty, most clients are neither affluent nor typical of alternative and complementary therapy users.

Few studies have reported the effects of healing on subjects with cancer. Consequently, since little is known about the safety of this, or indeed many other complementary modalities (Ernst and Barnes, 1998), the detection of any adverse effects was an important objective of this study.

Aims

The aims of this study were,

- To evaluate the outcomes of healing by gentle touch in the treatment of clients with cancer.
- To determine whether or not the treatment is safe.

Methods

Thirty-five subjects with cancer were recruited from new clients attending The Centre for treatment between 1995 and April 2001. Twenty-nine per cent were referred formally by local GPs, the remainder being self-referred following the word of mouth recommendation of friends or health-care professionals. Exclusion criteria comprised recent prior attendance at The Centre, failure to complete the course of four sessions within 6 weeks and failure to complete both entry and post-treatment questionnaires. Existing clients were excluded in order to evaluate the effects of the first series of four healing sessions. The initial study (Tiplady, 1996) received ethical approval from North Cumbria Health Authority and the extended study continued with the same method. The research process was consistent with St. Martin's College 'Ethical Principles and Guidelines for Research Involving People' (revised 2002).

The subjects received four 1-h healing sessions within a 4–6 week period, undertaken by either of two therapists, although one treated 90% of the subjects in this study. The purpose of the treatment is to enable the subject's own self-healing mechanisms to function more effectively. The Centre's standard practice involves non-invasive touch on the head, chest, arms, legs and feet for approximately 40 min, most usually while the subject lies comfortably on a treatment bed. Informal conversation concerning the health and well-being of the subject, along with reports by the subject of any physical, mental, emotional or spiritual changes since the previous session, take place while the treatment is occurring. Subjects may also drowse, sleep or talk as they feel inclined. A 10-min rest concludes the session. Although a simple, repeating pattern of touch is followed by the therapist at each session, successful treatment depends not upon an exact physical routine, but on sensitive response to the altering circumstances of the subject, concentration as in meditation or contemplative prayer, and the ability to listen sympathetically both to the voice and the body of the subject. Healing treatment is more truly defined in relationship than by technique.

After giving informed consent, subjects were asked to complete a questionnaire before the first treatment session and another at end of the course of four sessions. Questionnaires were anonymised by the use of code numbers. The questionnaires included the EuroQoL (EQ-5D) and visual analogue scales (VAS). The EQ-5D is an extensively used and validated generic state of health measure for which Hurst et al. (1994), Van Agt et al. (1994), Dorman et al. (1997), and Dorman et al. (1998) have provided detailed analyses regarding reliability and construct validity. The VASs (subscale titles in brackets) monitored clients' subjective assessments of their pre- and post-treatment physical (pain, disability, immobility, sleep disturbances, reliance upon medication, ability to participate in usual activities) and psychological (stress, panic, fear, anger, relaxation, coping, depression and/or anxiety) functioning. Demographic characteristics of clients, the duration of the problem that led to their attendance at The Centre, medical history, prior expectation of treatment effect, post-treatment satisfaction and previous experiences of complementary therapies were also monitored.

End point descriptors were used to help clients to locate their position on the visual analogue scales. For example, 0 = 'No pain' to 10 = 'In a lot of pain'; 0 = Coping badly to 10 = Coping well. In the case of sleep disturbances, 0–3 = Sleeping too much, 4–7 = Sleeping well and 8–10 = Sleeping

badly. Prior expectation of treatment effect was assessed on a VAS where 0 = Expect a little, 5 = See what happens and 10 = Expect a lot. The EQ-5D asked subjects to choose statements that best described their state of health at that moment from five subscales relating to walking, washing/dressing, usual activities (work, study, housework, family or leisure), pain/discomfort and anxiety/depression. The general form of the statements is as follows (with illustrative scores in brackets), I have no problems walking (1); I have some problems walking (2); I am confined to bed/wheel-chair (3), or, I am not anxious or depressed (1); I am a little anxious or depressed (2); I am very anxious or depressed (3). They then indicated their general health status on a VAS where 0 = Worst possible state and 100 = Best possible state.

Analysis

The EQ-5D data were analysed using pre- to post-treatment differences in scores for each subscale for each subject as the basis of the statistical comparison.

On post-treatment questionnaires, subjects taking medication at entry were asked to circle statements indicating whether or not there had been changes in their medicines consumption. Differences between entry and post-treatment scores were calculated and analysed statistically using Wilcoxon's matched pairs, signed ranks test for paired data.

In separate analyses, subjects were subdivided according to initial (entry questionnaire) severity of stress, pain, sleep disturbance and coping ability. Changes after treatment were assessed comparatively in order to determine whether or not the degree of benefit they experienced was influenced by the initial extent of their discomfort, disability or dis-ease. Data collected on subjects' prior use of complementary therapies was analysed via subgroup comparisons, to determine any effect of prior experience on outcomes.

The Statistical Package for Social Sciences (SPSS, Chicago, IL, USA, 1998) version 9.0 for Windows, was used for all statistical analyses.

Findings

Characteristics of the study sample

Of the 48 clients with cancer who attended The Centre between 1995 and April 2001, thirty-five

completed questionnaires both before their first treatment and after a fourth treatment had been given, three died and 10 were not given a follow-up questionnaire at an appropriate time for this analysis. This was due to sporadic administrative difficulties consequent upon the voluntary nature of reception staff at The Centre and is highly unlikely to have introduced bias into the findings of the study. The characteristics of the research participants, as summarised in Table 1, were, predominantly female, aged 24–80, with equal proportions having had their illness for under 1 year and between 1 and 5 years. Forty per cent of

Table 1 Characteristics of the study population of 35 individuals with cancer who completed entry and post-treatment questionnaires (percentages in parentheses).

<i>Age and gender</i>	
Median age (years)	57 (range 24–80, interquartile range 50–63)
Male	11 (31)
Female	23 (66)
Gender undisclosed	1
<i>Type of cancer</i>	
Brain	1
Breast	6 (17)
Gastrointestinal	3 (9)
Gynaecological	1
Leukaemia	1
Lung	1
Prostate	2 (6)
Undisclosed	20 (57)
<i>Duration of condition</i>	
< 1 year	17 (49)
1–5 years	16 (46)
> 5 years	0
Undisclosed	2 (6)
<i>Medical treatment status</i>	
Treatment	33 (94)
No treatment	2 (6)
Medication (analgesics, etc.)	7 (23)
Radiotherapy	3 (10)
Chemotherapy	5 (16)
Surgery	6 (19)
Surgery + radio/chemotherapy	9 (29)
Medical treatment type undisclosed	5 (14)
Previous complementary therapy	21 (60)
No previous complementary therapy	14 (40)

participants recorded that their cancer was at an advanced stage, but further details were not provided. Most (94%) had received medical treatment (chemotherapy, radiotherapy, or surgery used as single treatments or in combination) and over half (60%) had tried a complementary therapy before. At entry, the median rating for subjects' expectation of treatment outcomes was 6 ('See what happens', $n = 32$, interquartile range 5–8) and did not exceed 6 when research participants' scores were sub-grouped according to initial severity of their symptoms.

Self-assessed outcomes

As shown in Table 2, on entry to the study, stress was rated as the most severe symptom and fell by three points following treatment ($P < 0.0004$). Pain and fear were reduced by two points ($P = 0.019$ and 0.012 , respectively). Levels of relaxation and coping ability increased by three and one point respectively ($P = 0.001$ and $P < 0.0004$ respectively). Sleep pattern improved by one point ($P = 0.021$) in the direction of the optimum 'Sleep well' score (5). Although median scores moved in the direction indicative of improvements, there were no statistically significant changes in panic, anger, disability or immobility.

Subjects reported a median improvement of 12.5 points ($P = 0.008$) in the general health score (a component of the EQ-5D, Table 1). Previous experiences of complementary therapies had no influence on outcomes. There was little change in medicines consumption.

Table 3 shows the results of analyses in which subjects were subdivided according to severity of

stress, pain, sleep disturbance and coping ability on entry. Moderate and severe stress levels were reported by the majority of subjects on entry, with 63% sleeping well and 31% sleeping very little. Mild pain was reported by 43% of subjects, 29% reported moderate pain and 29% severe pain. Median expectations of treatment did not exceed 6 ('see what happens') for any group, regardless of degree of severity of symptoms on entry.

Following treatment, the most substantial improvement was seen in those with scores indicating the greatest severity on entry, in all symptom categories. No statistically significant change was found in those with mild scores on entry ($P > 0.05$, Table 3), but in respect to stress reduction there was a trend towards amelioration of this symptom in people with mild stress. Median scores for subjects with severe stress levels on entry improved by 6 points ($P = 0.003$). Those reporting severe pain on entry improved by three points ($P = 0.011$), and those sleeping badly improved by one point ($P = 0.019$). Those coping badly or moderately well on entry improved by three ($P = 0.017$) and two points, respectively ($P = 0.002$).

Figure 1 illustrates the numbers of participants responding in each EuroQoL (EQ-5D) questionnaire category before and after treatment. The number of subjects experiencing severe pain fell from 9 to 4. The number reporting moderate pain levels increased from 19 on entry to 23 following treatment, because many downgraded from severe to moderate pain. One of the subjects experiencing pain on entry reported 'No Pain' following treatment. ($P = 0.058$ for all changes in pain using this EuroQoL measure shows a clear trend in the same direction as the highly statistically significant improvements detected using the VAS.)

Table 2 Median scores on entry and change following four healing sessions (interquartile ranges in parentheses).

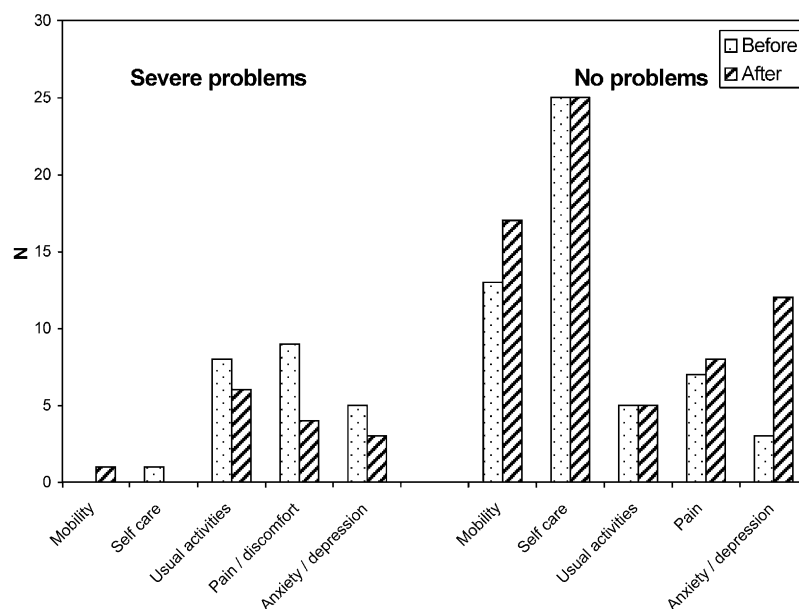
Symptom	Number	Entry Median	Post-treatment Median	Improvement	P^*
Stress	33	6 (3–8.5)	3 (2–5)	3	0.0004
Panic	28	3 (1–5)	2 (1–3)	1	0.232
Fear	30	5 (2–7)	3 (1–4)	2	0.012
Anger	30	4.5 (2–6)	2 (2–4)	2.5	0.093
Disability	29	4 (1–6)	3 (2–7.5)	1	0.308
Immobility	31	3 (1–5)	2 (1–6)	1	0.685
Pain	35	5 (1–8)	3 (1–6)	2	0.019
Sleep disturbances	34	7 (5–8)	6 (5–7)	1	0.021
Relaxation	35	5 (4–7)	8 (5–9)	3	0.001
Coping	35	7 (5–8)	8 (7–9)	1	0.0004
Health score	32	50 (36–64)	62.5 (50–80)	12.5	0.008

*Wilcoxon matched pairs, signed ranks test for paired data.

Table 3 Median change following four healing sessions for subjects with mild, moderate and severe entry levels of stress, pain, sleep disturbances and coping ability (interquartile ranges in parentheses).

Symptom	Number	Entry Median	Post-treatment Median	Improvement	<i>P</i> *
<i>Stress</i>					
Mild	9	2 (1.5–3)	2 (1–2)	0	0.059
Moderate	12	6 (5–7)	5 (3–7)	1	0.068
Severe	11	9 (8–10)	3 (2–5)	6	0.003
<i>Pain</i>					
Mild	15	1 (1–2)	1 (1–3)	0	0.203
Moderate	10	5 (5–7)	3.5 (3–5.50)	1.5	0.084
Severe	10	9.5 (8–10)	6.5 (3–7.5)	3	0.011
<i>Sleep disturbances</i>					
Too much	1 [†]	2	3	1	
Sleep well	22	5.5 (5–7)	5.5 (4–7)	0	0.276
Sleep little	11	8 (8–9)	7 (6–9)	1	0.019
<i>Coping</i>					
Not coping	7	4 (3–4)	7 (6–9)	3	0.017
Moderate coping	19	6 (5–7)	8 (7–9)	2	0.002
Coping	9	8 (8–10)	9 (8–9)	1	0.336

*Wilcoxon matched pairs, signed ranks test for paired data.

[†]Only one subject reported sleeping too much on entry.**Figure 1** The number of participants responding in each EuroQoL (EQ-5D) questionnaire category (*N* = numbers of patients). Mobility *N* = 34; self-care, *N* = 35; usual activities, *N* = 35; pain/discomfort *N* = 35; anxiety/depression, *N* = 35.

After treatment, the number experiencing severe problems with anxiety and/or depression (figure), fell from 5 to 3. Twelve subjects reported no problems in this dimension compared to three before treatment ($P = 0.005$ for all changes in

anxiety and/or depression). No statistically significant changes were found in scores on mobility, self-care and usual activities subscales.

On entry, 26 clients reported regular use of medication to alleviate their symptoms, including

analgesics, antidepressants and steroids. After treatment, 23% ($n = 6$) of these clients reduced, 62% ($n = 16$) maintained and 15% ($n = 4$) increased usage of medication.

The median rating on a scale assessing the degree of benefit gained from attending The Centre was 8 ($N = 35$, interquartile range 7–10, = 'Helped a lot'). There were no reports of adverse events following treatment.

Discussion

Although caution is required in the interpretation of this uncontrolled study, the present findings indicate clearly that healing as assessed by cancer sufferers was an effective and safe adjunct to conventional medical treatment for improving their physical and psychological well-being. The degree of satisfaction expressed by subjects both quantitatively via the VAS and by qualitative data collected in an 'open' question section of the questionnaire (unpublished) indicates that it was of considerable value to them. The confidentiality and anonymity guaranteed to subjects ensured as far as possible that their questionnaire responses provided an accurate account of their experiences of treatment.

The findings are entirely consistent with Tiplady's (1996) report that healing treatment at The Centre reduced stress, depression and anxiety, promoted relaxation and ability to cope, and relieved pain. Furthermore, they reinforce and extend Dixon's (1998) report of healing being associated with improvements in symptom scores, anxiety and depression ratings and general functional ability in patients with various chronic ailments, not including cancer. The present outcomes also parallel the findings of Ferrell-Torrey and Glick (1993), who reported reduced levels of pain perception and anxiety following therapeutic massage in patients with cancer.

The subjects recruited were representative of routine clinical practice and the outcomes are therefore generalisable to the population served by The Centre and to similar populations elsewhere. They were of various ages and attended the centre with diverse forms of cancer at various stages including 'advanced' stages recorded by fourteen of the subjects. There were more female than male subjects, which is consistent with the findings of Downer et al. (1994), although the majority of subjects in their study were young. In contrast to the findings of Slade (1992) and Downer et al. (1994), in which use of various alternative or complementary therapies by patients with cancer

declined proportionally with decrease in social class, subjects of the present study were representative of all classes, but predominantly were economically disadvantaged. This study did not, therefore, select for highly educated subjects and outcomes were unlikely to have been influenced by socio-demographic status or familiarity with complementary or alternative therapies.

The general improvement in psychological well-being observed in subjects of the present study is particularly noteworthy and supports and extends the findings of Dixon (1998) that healing had marked beneficial effects on affective state. Many current medical treatments for cancer involve stressful treatment regimens, and quality of life factors influence the individual's ability to cope with such procedures (Jefferies, 2002). The value of touch in promoting emotional as well as physical comfort has been highlighted by Chang (2001) and is likely to be particularly pertinent in such circumstances. Attention in the form of gentle touch, when practised with the sole intention to care and to enhance well-being, is likely to contrast favourably with touch received during the course of uncomfortable medical procedures. The beneficial effects of touch on heart rate and oxygen saturation in pre-term infants are well documented (Harrison et al., 1990; Modrcin-Talbott et al., 2003) and may explain the improvement in overall well-being demonstrated in the present study. Campbell (2000) suggested that in evolutionary terms, the relative absence of touch in modern life is an aberration; the restoration of regular physical contact in the form of healing by gentle touch may begin to correct this deficit.

Also of considerable benefit to patients with cancer is a reduction in fear, as this emotion is one of the chief problems following cancer diagnosis (Leydon et al., 2000). Improvements in anxiety/depression ratings are also particularly important due to the adverse influence of these conditions on a number of symptoms associated with cancer and its medical treatment. These include breathlessness and pain severity, both of which are exacerbated by anxiety (Craig, 1994; Bredin et al., 1999), and chemotherapy-induced nausea which is exacerbated by adverse emotional states (Peters et al., 1994; Montgomery and Bovbjerg, 2000). It has been suggested that complementary approaches which reduce nausea might improve patient compliance with aggressive chemotherapy regimens (Cosh and Sikora, 1989; Peters et al., 1994). The trauma of treatment and the anxiety following diagnosis are also likely to contribute, via hypothalamic-pituitary-adrenal (HPA) axis dysregulation, to immunosuppression (Ader et al., 1995; Olff, 1999). It seems

likely that an immune system that has been compromised both by cancer and its treatment, and impeded by unfavourable emotions may benefit from the improvements in anxiety/depression ratings recorded in the present study.

The pre- to post-treatment changes in symptoms were not confined to the psychological sphere but included pain reduction. This is consistent with the findings in clients with musculoskeletal disorders, who showed particularly pronounced improvements in ratings for pain and disability symptoms (Weze, 2001). In contrast, Downer et al. (1994) concluded that the benefits of complementary therapies (which included healing, relaxation, visualisation, diets, homoeopathy, herbalism and acupuncture) used by patients with cancer were mostly psychological, as only a few individuals reported decreased nausea and easier breathing, and none reported reduced pain. Downer and colleagues, however, observed the results of a conceptually diverse range of therapies with varying degrees of effectiveness over an unspecified study period. Some therapies may have required longer to produce an effect than others, several subjects used more than one therapy, and, since evaluation of effectiveness was not the primary objective of their study, there was no definitive method for attributing an effect to a particular therapy.

Pain perception is subject to modification via stress, anxiety, anticipatory and attentional factors (Craig, 1994; Fields and Basbaum, 1994). The circularity around pain and anxiety may be an important factor in the mechanism of healing; because pain and anxiety potentiate each other, alterations in one will affect the other, along with the related systems of each. Indeed, if the integrated immune, neuroendocrine and psychological systems are modelled as an emergent functional unit with regulatory capabilities that exceed the sum of its parts, it seems likely that the effects of healing influence this unit via as yet undetermined mechanisms.

The limbic system has been suggested by Campbell (2000) as a possible access point shared by therapies involving touch (healing, acupuncture, Therapeutic Touch) and/or emotional components (psychotherapies, visualisations). It seems likely that the physiological response to touch as a sensory stimulus is a crucial step in this pathway. Future investigation of these pathways may illuminate the mechanisms responsible for the endurance of these effects beyond the healing session and explain with more precision why healing outcomes are not exclusively placebo responses.

The characteristic finding of the present and musculoskeletal studies—that those with the most

severe symptoms at the time of entry showed the greatest improvement—was particularly marked in pain ratings, both on the VAS and EuroQoL questionnaire. This argues powerfully for the veracity of the impact of healing because psychological interventions such as cognitive-behavioural therapy are not reputed to affect physical symptoms so profoundly. Allied to this is the finding that median prior expectations fell within the 'see what happens' range, regardless of symptom severity. The observation that prior expectations were not predictive of treatment outcomes indicates that anticipation of benefit (a commonly identified aspect of placebo response) was not fundamental to the mechanism of healing.

The management of physical symptoms is a vital aspect of cancer treatment and these findings demonstrate that healing facilitates their amelioration. Patients with cancer are particularly susceptible to the adverse effects of drug-drug interactions due to multimodal treatment strategies including chemotherapy, immunotherapy and the medications taken to counter their side effects (Irwin and Klemme, 2001). After surgery, many patients have to cope with further physical challenges (Cosh and Sikora, 1989) including pain, disability and difficulty in carrying out usual activities. While the trends towards improvement in scores for disability or ability to carry out usual activities did not reach statistical significance in the present small study, the convincing reductions in pain and anxiety could contribute to alleviation of distress during post-operative recovery.

The potential value of healing in palliative care is considerable, especially in cases of advanced malignancy, where inoperable tumours and other severely distressing conditions are encountered. Any perceptible decrease in morbidity and fear is of great value for such patients and healing can provide medical practitioners with a potent resource for patient support in these challenging circumstances.

There were no notable changes in use of medication by the subjects, perhaps because benefits of treatment were offset by the progression of the disease. This interpretation is consistent with the increase in general health rating following treatment being less pronounced than that observed in groups of clients with other diseases being evaluated at The Centre. These figures provide circumstantial evidence that the lesser improvement in cancer sufferers could be attributable to the distinctive nature and long-term prognosis of their disease. For comparison with the 12.5 point median improvement for the group of clients with cancer, the median improvement in general health

for subjects with a wide range of conditions (unpublished observations) ($n = 285$) was 20 points ($P < 0.0004$), for subjects with musculoskeletal disorders (Weze, 2001) ($n = 67$) was 20 points ($P < 0.0004$) and for subjects with mental health disorders (unpublished observations) ($n = 134$) was 24 points ($P < 0.0004$).

Conclusions

The improvements in the physical and psychological functioning of subjects in this uncontrolled study provide preliminary evidence of the safety and effectiveness of healing as an adjunct to conventional cancer treatment. Given the serious nature of their disease and the morbidity associated with its diagnosis and treatment, we consider these improvements, which followed only four sessions of healing, to be particularly notable. The potential for healing to enhance patients' ability to cope with medical treatments for cancer and the complications of advanced disease warrants a thorough evaluation by prospective, randomised, controlled trial. Funding is being sought for more detailed qualitative and controlled quantitative, questionnaire-based studies.

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