The use of massage therapy for reducing pain, anxiety, and depression in oncological palliative care patients: a narrative review of the literature

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CRD summary
The authors concluded that massage therapy was to be considered a cost-efficient noninvasive intervention that positively influenced and contributed to the reduction of pain, anxiety and depression in seriously ill cancer patients. Given the possibility of missing studies and reliance on a small and variable yield the authors’ conclusion seems overstated and its reliability is unclear.

Authors’ objectives
To evaluate the use of massage therapy for reducing pain, anxiety and depression in patients receiving oncological palliative care.

Searching
The Cochrane Library, CINAHL, PsycINFO, MEDLINE, EMBASE, AMED and Trip databases were searched for studies published between 2000 and 2010. Reference lists of relevant studies and selected journals were screened for further articles. Only studies published in English, German or Italian were included.

Study selection
Eligible studies were of massage therapy (full body or partial, including hand massage) given in palliative/oncological care settings or at home to adult patients with advanced stage oncological disease. The outcomes of interest were reductions in pain, anxiety, and depression. Studies of patients suffering from a psychosis were excluded. Studies of other related complimentary therapies (aroma therapy massage, reflexology, lymphatic drainage and acupuncture/acupressure) were excluded. Methodological quality was used to exclude studies from the initial yield of included studies (threshold for exclusion not reported).

Studies were conducted in the United States and Asia. Participants were men and women aged between 30 and 88 years diagnosed with metastases relating to lung, breast, pancreas, prostate and colorectal cancers; some patients had bone metastases. All patients had an estimated life expectancy of less than six months. Most patients received full body or partial massage as part of palliative care in a hospice or oncological centre. Intervention durations varied (five to 45 minutes) and different outcome measures were employed.

Two independent reviewers selected the studies. These were subsequently discussed by the same reviewers.

Assessment of study quality
Study quality was assessed using the Jadad scale (randomised controlled trials) and Downs and Black checklist (randomised and non-randomised studies).

Two independent reviewers carried out the quality assessment and discussed the results.

Data extraction
Data were extracted to enable presentation of proportions and mean values in relation to changes in the outcomes of interest. Statistical significance was indicated by p-values.

The authors did not state how many reviewers carried out the data extraction.

Methods of synthesis
A narrative synthesis was presented. Differences between studies were presented in tabular form.

Results of the review
Six studies were included in the review (1,875 patients): three randomised controlled trials (576 patients), one quasi-
experimental study (1,235 patients) and two observational studies (64 patients). The results of the quality assessment were not reported.

**Reduction of pain (five studies):** Statistically significant reductions in pain were reported in four studies and in one study the effects lasted up to 18 hours. Results of three studies indicated that massage therapy was more effective in patients with strong pain perception.

**Reduction of anxiety (three studies):** Physical relaxation was associated with immediate and lasting effects on anxiety (three studies) but anxiety was not well defined. Significant reductions in perceived anxiety were reported following full body massage (one study), hand massage (one study) and gentle touch/full body massage (one study).

**Reduction of depression (two studies):** Both studies found improvements in depressive mood. Gentle touch massage showed more favourable results than foot massage but no differences were reported when compared with full body massage (one study).

There were no reported negative effects of massage therapy.

**Authors’ conclusions**
Massage therapy was to be considered a cost-efficient noninvasive intervention that positively influenced and contributed to the reduction of pain, anxiety and depression in seriously ill cancer patients.

**CRD commentary**
The review question was clear. Inclusion criteria were specified adequately. Various relevant data sources were accessed. Language and publication restrictions might mean that studies were missed and the relative biases could not be ruled out. Study selection and quality assessment were carried out with attempts to minimise error and bias; it was unclear whether similar steps were taken for data extraction. Appropriate quality assessment checklists were specified; although apparently used as a study selection tool, the results of this assessment were not presented. Study details were presented. These demonstrated high variation among the interventions and outcome measures and suggested that the method of synthesis was appropriate.

Given the possibility of missing studies and the reliance on a small and variable evidence base the authors' conclusion seems overstated and its reliability is unclear.

**Implications of the review for practice and research**
**Practice:** The authors suggested that massage therapy might be particularly helpful to socially isolated patients.

**Research:** The authors stated that further studies were needed to confirm the effectiveness of massage therapy. Such studies should include different kinds of massage therapy using uniform interventions and designs and employ standard methods of collecting data to enable comparisons.

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