Massage for symptom relief in patients with cancer: systematic review
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CRD summary
The authors concluded that the effectiveness of massage for patients with cancer was unclear due to the poor quality of research available. The authors conclusions are appropriate and likely to be reliable.

Authors' objectives
To assess the effectiveness and safety of massage therapy for reduction of physical or psychological symptoms and improvement of quality of life for patients with cancer

Searching
Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, CINAHL, EMBASE, AMED, PsycINFO, SIGLE, Cancerlit, British Nursing Index and Dissertation Abstracts International were searched to September 2006. Search terms were reported. No language restrictions were applied. Reference lists of retrieved articles were scanned, relevant journals and conference proceedings were handsearched for additional studies. References in published literature and the SIGLE database were searched for unpublished reports.

Study selection
Randomised controlled trials (RCTs) of massage therapy conducted by a qualified therapist on adult participants with a diagnosis of cancer and receiving care in any healthcare setting were eligible for inclusion. Massage therapy had to include tissue manipulation. Outcomes of interest were patient-reported levels of physical and psychological symptom distress and quality of life measured by validated assessment tools.

Interventions in the included studies were massage alone or with aromatherapy. Control groups included no massage, quiet time, usual care, rest, sitting with masseuse or massage with carrier oil. Site of massage included shoulders, neck, face and scalp, feet, arms, legs alone or in combination. The proportion of participants who were female ranged from 36% to 100%. The mean age of participants ranged from 17 years to 88 years where reported. Cancer site and stage of included participants varied between studies. Participants received various chemotherapy and radiotherapy treatments for cancer. Instruments used to assess outcomes included the Spielberger State-Trait Anxiety Inventory (STAI), Profile of Mood States (POMS), Visual Analogue Scale for nausea, McCorkle Symptom Distress scale, and other anxiety, depression, symptom or quality of life scales.

Two reviewers independently screened titles and abstracts. Full texts of studies were then independently screened for inclusion by three reviewers.

Assessment of study quality
Validity was assessed using criteria adapted from Juni, Jadad and the CONSORT statement and included assessment of randomisation, allocation concealment, blinding of participant, provider and outcome assessor, attrition bias, sample size and duration of follow-up. Two reviewers independently assessed validity.

Data extraction
Data on outcomes were extracted and tabulated.

The authors stated neither how data extraction was conducted nor how many reviewers conducted data extraction.

Methods of synthesis
The studies were combined in a narrative synthesis with additional information provided in tables.

Results of the review
Ten RCTs (n=428) were included in the review. The methodological quality of the included studies was regarded as
poor. Allocation concealment was reported as adequate in one RCT. Only two RCTs reported using adequate randomisation methods. Blinding of outcome assessors was reported in four RCTs, but none reported blinding of participants or interventionist. Attrition ranged from 10% to 48%, where reported. The longest duration of follow-up assessment was three weeks after intervention.

Mixed results were reported for all outcomes, with improvements in pain (three RCTs) and nausea (two RCTs) reported immediately after the intervention in some trials but not for longer term follow-up. Results for psychological symptoms were mixed; four RCTs reported improvements in anxiety and other psychological symptoms. Results for quality of life were also mixed; one RCT reported a statistically significant improvement and another reported no change. Improvements were reported in depression for one RCT, but no change was reported for another RCT.

Adverse events included one case of skin rash and one RCT that reported a higher incidence of digestive problems in the essential oil massage intervention group compared with the no-massage control group.

Authors' conclusions
No definitive conclusions could be drawn regarding the effectiveness of massage for patients with cancer care due to the methodological limitations of the included studies.

CRD commentary
Inclusion criteria were clear for participants, outcomes, study design and intervention. Several relevant sources were searched and efforts were made to minimise language and publication bias. Methods were used to minimise reviewer errors and bias in the selection of studies and assessment of validity, but it was unclear whether similar steps were taken for data extraction. Validity was assessed using published criteria and results of the assessment were reported. A narrative synthesis was appropriate given the differences between studies of interventions, participants, outcomes and healthcare settings. The authors appropriately considered the small sample sizes and the differences between studies. Consequently the authors’ cautious conclusions correctly reflected the poor quality studies on this topic.

Implications of the review for practice and research
Practice: The authors stated that further research was needed before healthcare providers and nurses can make evidence-based decisions as to whether massage therapy is an appropriate treatment for patients with cancer.

Research: The authors stated that further methodologically rigorous research was needed to evaluate the effect of massage therapy, with studies that included larger sample sizes, longer term follow-up, determining optimum number of massages, areas of the body to be massaged and any benefits of the addition of particular essential oils to massage.

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