

The complementary medicine (CAM) for the treatment of chronic pain: scientific evidence regarding the effects of healing touch massage

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Abstract. *Background and aim:* Evidence-based medicine offers effective pathways of pharmacological treatment for chronic pain that may compromise the quality of life of patients; this is one of the main reasons why more and more people resort to traditional and complementary approaches, to try to maintain or regain their health. The effectiveness of the various forms of complementary treatments often cannot be proven objectively, which is why, given the need to find more concrete evidence of the effectiveness of complementary therapies with particular reference to the method of healing touch massage, a review of the literature was conducted in order to gather evidence of the efficacy of the specific method regarding pain and other health outcomes of patients with malignant disease to support a proposal for improvement, based on the practice of healing touch massage conducted by nurses. *Method:* Systematic review. *Results:* There are several examples (in some cases specifically regarding patients with tumors) of the positive effects of healing touch massage on pain, anxiety and fatigue, and also on biochemical parameters. *Conclusions:* The way to full recognition by both the institutional and the scientific community seems to promise fairly well, although it should be noted that the achievement of this goal will require further research avoiding the limitations of previous studies.

Key words: complementary therapy, pain reduction, touch massage, nurse, healing touch massage

Introduction

One of the main symptoms of disease that afflicts man is pain. The International Association for the Study of Pain (IASP) proposes to define pain as “an unpleasant sensory and emotional experience associated with a hazard or potential tissue present, or described in terms of potential hurt” (1).

Pain sometimes can become chronic, regardless of the underlying disease, transforming itself into a real disease. Pain has long been neglected; it has only recently been calculated that only a tiny fraction of the people (less than 10%) in the world who need pallia-

tive care are currently receiving it. This is the situation photographed by the World Health Organization (WHO) in collaboration with the Worldwide Palliative Care Alliance (WPCA), in a document entitled Global Atlas of Palliative Care at the End of Life, that highlights the disparity in general in the world between the need for palliative care and the presence of services and facilities. The data show that 20 million terminally ill patients each year require palliative care, 6% of whom are children. And the number of those who request it has doubled, to about 40 million, including patients who may benefit from palliative care at an early stage of disease (2). That raises questions.

The importance of considering pain as a vital sign emerges from the awareness that has been universally reached: to treat pain right from the start improves the quality of life of the person and can reduce costs for health care organizations.

The WHO in 1996 proposed a 3-step scale for the pharmacological management of pain; in the first instance, to apply to cancer pain, later also used for the other kinds of chronic pain. The approach in three steps, according to the WHO, would add, for the treatment of pain, an overall strategy that also includes non-pharmacological treatments. Pain is divided into:

- Mild 1-3: indication for treatment with NSAIDs or paracetamol and adjuvants;
- Moderate 4-6: indication for treatment with mild opioids +/- NSAIDs and adjuvants;
- Severe 7-10: indication for treatment with major opioids +/- NSAIDs and adjuvants (3)

Complementary therapies

Classical treatment approaches to chronic pain include pharmacological measures; in addition to them, there are new therapeutic strategies that can assist the official ones and can contribute to the wellbeing of the person with chronic pain. These strategies include the use, in the clinical setting, of several methods, including the use of natural substances, that seem to have positive effects in preventive care, enhancing such aspects as assistance and support to treatment with drugs.

The spread of complementary therapies or non-conventional or alternative medicine (CAM, according to the definition given by the National Cancer Institute of Bethesda (U.S.A.)) appears to have significantly increased in the western world. Over 25% of the European population would seem to have resorted, at least once a year, to a type of unconventional therapy. More and more patients make this choice because the classic cancer cures do not respond fully to their needs and sometimes cause negative side effects that impair their quality of life (4). The key feature of these treatments is to have a vision of “a global and integral” view of the person: in short, a holistic view of man. The goal of nursing is to bring the individual to a phase of

adaptation for him to cope with the disease; for this purpose, these treatments are well suited to this role, especially for the natural ability they have to bring out the resources of healing already inherent in individuals.

The complementary treatments offer responses that do not stop at the disease (as diseased organ) but can be considered as “personal care”, where health is understood as maintaining and strengthening the unity that the person has with himself. Among the complementary treatments where nurses can play a role, the method of “touch-healing massage” can be an important component of the care relationship. The care team often touch the sick person: every action, every gesture of care, establishes a contact relationship, in which one is led inevitably to touch the body of the patient. The specific technique of the healing touch massage, which recalls the teachings of nursing theory of Martha Rogers (6), in its simplicity and ease of execution, is a way to approach the other with respect, without the filter of scientific and technical terminology (7).

The underlying idea of the practice of therapeutic touch is that it is ultimately the patient that can heal himself. In this context, the operator acts only as a support for the patient’s energy, as long as his immune system is powerful enough for him to be able to cope with the disease (8). Despite the recognition given to them by the World Health Organization, the debate on the “scientific credit” attributed to complementary therapies is broad and controversial. Already the definitions assigned by major American research institutes make clear the skepticism with which the scientific community considers the use of complementary therapies. A *New England Journal of Medicine* editorial argued that *“It’s time for the scientific community to stop giving CAM a free ride. There cannot be two kinds of medicine—conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work”* (9). This the opinion of an editorial of the American Medical Association : *“There is no Alternative Medicine. There is only scientifically proven, evidence-based medicine supported by solid data or unproven medicine, for which scientific evidence is lacking”* (10). Important opinions but dating back to the 90s; recently, positions have been revised, while maintaining a certain diffidence in accepting the validity of the

complementary therapies. At the root of the many criticisms that continue, as in the past, to rise from the scientific community is the issue that the effects of complementary therapies are not supported by any evidence of scientifically proven effectiveness. The aim of this literature review was to highlight evidence of the efficacy of pain relief of the healing touch massage method; we chose to focus the research on this topic because of the importance of the role of nurses.

Methods

Search strategy

The research was conducted on the following search engines: PsycINFO, MEDLINE, CINAHL and Google Scholar using the following keywords: complementary therapy, pain reduction, touch massage, nurse, healing touch massage, with the Boolean operators “AND” and “OR” in different search combinations. Publications issued from 2003 to 2014 were taken into account .

Inclusion Criteria

Only the primary and secondary sources were considered. Publications that had as their main topic the complementary therapy of healing touch massage and the role of nurses were considered.

Only systematic reviews were considered.

Publications with different research designs and methodologies, both qualitative and quantitative, were taken into consideration. Only publications in English, Italian, French and Spanish were included.

Results

Were therefore found 23 publications that met the selection criteria. Of these, 9 were eliminated because they were considered not related to the main topic. Fourteen reviews met all inclusion criteria (Table 1).

Snyder M, Wieland J, 2003 - The review set out to identify the complementary therapies most frequently

used by nurses to relieve anxiety, promote comfort and reduce pain in cancer patients. This article highlighted the effectiveness of some complementary therapies, such as the method of hand massage (6 studies), on reducing anxiety and pain; once taught to patients and their families, this could help promote self-care (11)

Wardel D, Weymouth K, 2004 - The purpose of the review was to explore the various implications of healing touch massage on patients with various diseases (including cancer). In conclusion, an examination of 30 studies highlighted the beneficial effects, in particular towards the reduction of anxiety, stress and pain, and some biomedical parameters; however, the authors showed themselves to be especially critical of the scientific rigor with which the studies were conducted (12).

Hibdon SS, 2005 - The review analyzed the aspects of complementary therapies in cancer care in order to identify the benefits. The study showed that complementary therapies were important in helping the patient with cancer because they enabled him to improve his quality of life, reducing pain, fatigue and other side effects of cancer treatment. The author added that since the nursing practice in cancer care needs to be holistic, the complementary therapies may offer the opportunity to cover the “missing parts” of traditional therapy once used alone (13).

Bardia et al., 2006 - A systematic review of RCTs (randomized controlled trials) aimed at evaluating the effectiveness of CAM therapies on cancer-related pain. Eighteen studies were identified (eight poor, three intermediate and seven high quality based on Jadad score), out of a total of 1499 patients. Seven studies reported a significant benefit for CAM therapies, three of which related to healing touch massage. The authors concluded that there were promising data for the ability of some CAM therapies (specifically the healing touch massage) to positively influence cancer pain (14).

Pierce B, 2007 - This review showed the findings of controlled trials to evaluate the effectiveness of CAM (including in particular the method of healing

Table 1. Description of the 14 reviews that met all inclusion criteria

Title	Author/s, year	Journal
Complementary and alternative therapies: what in their place in the management of chronic pain?	Snyder M, Wieland J, 2003	Nurs Clin North Am
Review of studies of healing touch	Wardell DW, Weymouth KF, 2004	J Nurs Scholarship
Biofield consideration in cancer treatment	Hibdon SS, 2005	Semin Oncol Nurs
Efficacy of complementary and alternative medicine therapies in relieving cancer pain: a systematic review	Bardia A, Barton DL, Prokop LJ, Bauer BA, Moynihan TJ, 2006	J Clin Oncol
The use of biofield therapies in cancer care	Pierce B, 2007	Clin J Oncol Nurs
Does Therapeutic touch help reduce pain and anxiety in patients with cancer?	Jackson E, Kelley M, McNeil P, Meyer E, Schlegel L, Eaton M, 2008	Clin J Oncol Nurs
Touch therapies for pain relief in adults	So PS, Jiang Y, Qin Y, 2008	Cochrane Database Syst Rev.
The effect of therapeutic touch on pain	Monroe C, 2009	J Holist Nurs
Massage therapy for cancer palliation and supportive care: a systematic review of randomised clinical trials	Ernst E, 2009	Support Care Cancer
Effects of healing touch in clinical practice: a systematic review of randomized clinical trials	Anderson JG, Taylor AG, 2011	J Holist Nurs
Biofield therapies: helpful or full of hype? A best evidence synthesis	Jain S, Mild PJ, 2011	Int J Behav Med
Biofield therapies and cancer pain	Anderson JG, Taylor AG, 2012	Clin J Oncol Nurs
Integrative oncology: managing cancer pain with complementary and alternative therapies	Running A, Seright T., 2012	Curr Pain Headache Rep
Energy therapies in oncology nursing	Coakley AB, Barron AM, 2012	Semin Oncol Nurs

touch massage) on the symptoms of cancer patients. The results underlined the actual benefits regarding pain, perception of fatigue, mood and quality of life, adding that the benefit did not stop at the patients, but also extended to family members and health professionals (15).

Jackson E et al., 2008 - The review specifically addressed the method of Touch Massage (12 studies out of a total sample of more than 10 million patients in U.S.A.), to try to understand the effects on cancer

patients. The results confirmed the effectiveness of this kind of treatment for the reduction of pain and anxiety (16).

So PS, Jiang Y, Qin Y, 2008 - The review had the aim of evaluating the effect of healing touch massage on any type of pain; it referred to randomized controlled trials, (RCTs) or controlled clinical trials (CCT). Twenty-four studies (involving 1153 participants) met the inclusion criteria. It showed the effectiveness of tactile therapies on the treatment of pain,

with a decrease in the perception of pain and a reduction in the use of analgesics (17).

Monroe C, 2009 - The contribution of Monroe referred to 7 studies conducted between 1997 and 2004 (only five of which refer to the method of healing touch massage), to understand whether the complementary care methods could significantly reduce pain. In conclusion it was noted that healing touch massage had a beneficial effect on pain, and also that there were no risks to the health of the patient subjected to treatment. The study concluded that healing touch massage could be considered as being among the nursing interventions for the treatment of pain (18).

Ernst E, 2009 - The aim of this systematic review was the evaluation of all available randomised clinical trials of massage in cancer palliation. Ernst found fourteen trials that met all inclusion criteria; the studies mentioned underlined that massage could alleviate a wide range of symptoms: pain, nausea, anxiety, depression, anger, stress and fatigue; however, because of the poor methodological quality of the studies included, we cannot draw any definite conclusion (19).

Anderson J, Taylor A, 2011 - The first review of Anderson and Taylor was aimed at critically evaluating the data from randomized clinical trials examining the clinical efficacy of the therapeutic touch as a form of supportive therapy to medical practice. The researchers identified five RCTs that referred to the use of therapeutic touch. The practices of therapeutic touch that were used in the pain centers, private clinics and operating rooms showed several benefits: reduced anxiety, increased relaxation and a sense of well-being (20).

Jain S, Mills PJ, 2011 - This review scrutinized 66 studies (52 of which were RCT) of various complementary methods (included healing touch massage), to assess their effects in different patient populations. This study showed that CAM treatments were able to reduce the intensity of pain and anxiety levels in patients hospitalized with cancer. In addition, they decreased the negative behavioral symptoms in patients with dementia. In particular, these treatments reduced anxiety in cardiovascular patients (21).

Anderson J, Taylor A, 2012 - In this second revision, Anderson and Taylor highlighted the fact that the public and health professionals have become increasingly inclined to accept the benefits provided by CAM, to support the physical, psychological, social and spiritual development for patients with cancer. It was also highlighted that the literary contributions found valid complementary methods defined for the purposes of reduction of pain due to cancer and its treatments (22).

Running A, Seright T, 2012 - The authors analyzed the evidence in the recent past on CAM for pain, with emphasis on the most common methods, including healing touch massage techniques. Seven reviews were identified: the specific studies reporting the effects of healing touch massage on cancer pain were nineteen in all. The studies generally showed and supported the use of massage to increase immune function, control blood pressure and mood, reduce anxiety and depression, and decrease visceral pain, nausea and constipation (23).

Coakley A, Barron A, 2012 - In this review of 11 studies there was growing evidence that energy therapies, and in particular the healing touch massage, had a positive effect in favor of relaxation and reduction of pain and a range of biohumoral responses, including a decrease in the levels of stress hormones, improved blood pressure, improved heart rate, decreased levels of cortisol and a better sense of perceived well-being (24).

Discussion

The institutional recognition of CAM is gaining ground all over the world; it is quite evident, however, that CAM treatments cannot be equated with official medicine since they cannot be supported by any evidence of scientifically proven effectiveness according to the canons of evidence-based medicine, the measurement of characteristics or perceptions relying solely on self-report scales. Referring to previous scientific contributions, investigating all studies of the reviews looking for scientific evidence, there are several testimonies to the effects of healing touch massage on biochemical

parameters. In several cases, however, the data refer to non-tumor pathologies, as in the case of Wilkinson et al., who found that the healing touch massage method can increase the levels of salivary immunoglobulin A in patients undergoing surgery (26). Other contributions show the benefits in terms of improvement in the values of blood pressure in patients with various diseases (27, 28). The following literary contributions, however, relate specifically to cancer patients.

Post White et al., 2003 - This randomised and prospective study basically tested the effects of two different techniques of healing touch massage with the standard treatment of 230 cancer patients. All the patients, divided into 3 subgroups (2 experimental groups and one control), were tested for heart rate, respiratory rate and blood pressure levels. The two intervention groups were treated with a series of sessions of normal massage (45 minutes for 4 weeks); the control group underwent the standard treatment (without massage). At the end of the treatment, significant improvement in the values of vital parameters (measured at T1 and T2 pre-intervention and post-intervention) was observed in the 2 intervention groups, as well as in mood, and a reduction in the use of NSAIDs, levels of pain, levels of anxiety, depression and fatigue (29).

Listing et al., 2010 - This research represents a further important contribution regarding the benefit of healing touch massage with the production of objective data. To study the efficacy of the procedure on stress perception and mood disorders, 34 women with a diagnosis of primary breast cancer were randomized and placed into an intervention group or a control group. For a period of 5 weeks, 2 days a week, the women in the intervention group were treated with a 30-minute session of classic massage. The control group, however, did not receive any addition to the routine treatment. In addition to the improvements in the levels of stress, anger and anxiety perceived, assessed by validated questionnaires (the Perceived Stress Questionnaire [PSQ] and the Berlin Mood Questionnaire [BSF]), significant improvements in blood levels of cortisol (baseline T1, at the end of 'intervention T2, and 6 weeks after T3) were observed in the intervention group compared to the control group (30).

Conclusions

Studies have shown that there are still limits. As noted, the vast majority of studies in the literature refer to the benefits reported on self-report scales; It would therefore be a good thing to continue on the path undertaken by a part of the research: to produce more effective results evaluated with objective measurements as far as possible. To the skepticism of the scientific community is added the fact that, in many parts of the world, there is a lack of a regulatory framework on the matter; this aspect probably contributes to arousing uncertainty towards CAM practices. It is necessary to establish certain rules for CAM treatment: this aspect could give greater visibility to the nurse, an increasingly qualified figure whose work is thus becoming increasingly integrated with that of the other professionals. CAM treatments are a legitimate part of health activities; the integration of these practices within the system of conventional medicine, as well as guaranteeing citizens the greatest freedom of choice of treatment, could ensure the highest level of safety and correctness of information, which would further enhance the job of nurses. The literary production would seem to confirm the great benefit that patients derive from the practices of healing touch massage: benefits primarily regarding pain relief, but also the quality of life of cancer patients. The implementation of a project based on the practice of healing touch massage by a team of nurses could certainly have an economic impact on the health organizations; but in the light of the literature findings, it seems plausible to consider a choice in this direction, which on one hand could enhance the figure of nurses, and on the other hand, more importantly, could help bring concrete benefits to the health of the patients.

References

1. Merskey H, Bogduk N. Part III: Pain terms, a current list with definitions and notes on usage (pp 209-214); in *Classification of Chronic Pain, Second Edition*. IASP Task Force on Taxonomy. Seattle: IASP Press; 1994.
2. Connor S, Sepulveda Bermedo M. *Global Atlas of Palliative Care at the End of Life*. London, GB: Worldwide Palliative Care Alliance (WPCA) press; january 2014

3. World Health Organization. Cancer pain relief. With a guide to opioid availability (2 ed.). Geneva: WHO Press; 1996.
4. Menniti Ippolito F, De Mei B. Caratteristiche d'uso e livelli di diffusione della medicina non convenzionale. *Annali ISS* 1999; 35(4): 489-497.
5. Braga G. *Medicine non convenzionali, un percorso tortuoso*. Pavia: Gemmagraf. 2001.
6. Rogers M. *An Introduction to the Theoretical Basis of Nursing*. Philadelphia: F.A. Davis Company. 1970.
7. De Luca E, Papaleo L. Il Nursing del contatto: l'esperienza del tocco e l'affettività nelle cure infermieristiche. *L'Infermiere* 2010; 39-41.
8. Krieger D. Il tocco terapeutico, la forza guaritrice del Therapy touch. Como: Red eds. 2000.
9. Angell M, Kassirer J. Alternative medicine the risks of untested and unregulated remedies. *New Engl J Med* 1998; 339 (12): 839-41.
10. Fontanarosa P, Lundberg G. Alternative medicine meets science. *J Am Med Assoc* 1998; 280 (18): 1618-9.
11. Snyder M, Wieland J. Complementary and alternative therapies: what is their place in the management of chronic pain? *Nurs Clin North Am* 2003; 38(3): 495-508.
12. Wardel D, Weymouth K. Review of studies of healing touch. *J Nurs Scholarship* 2004; 36(2): 147-54.
13. Hibdon, SS. Biofield considerations in cancer treatment. *Semin Oncol Nurs* 2005; 21(3): 196-200.
14. Bardia A, Barton D, Prokop L, Bauer B, Moynihan T. Efficacy of complementary and alternative medicine therapies in relieving cancer pain: a systematic review. *J Clin Oncol* 2006; 24(34): 5457-64.
15. Pierce B. The use of biofield therapies in cancer care. *Clin J Oncol Nurs* 2007; 11(2): 253-258.
16. Jackson E, Kelley M, McNeil P, Meyer E, Schlegel L, Eaton M. Does therapeutic touch help reduce pain and anxiety in patients with cancer? *Clin J Oncol Nurs* 2008; 12(1): 113-20.
17. So PS, Jiang Y, Qin Y. Terapias de toque para el alivio del dolor en adultos. *Cochrane Database of Systematic Reviews* 2008; Issue 11.
18. Monroe CM. The effect of therapeutic touch on pain. *J Holist Nurs* 2009; 27(2): 85-92.
19. Ernst E. Massage therapy for cancer palliation and supportive care: a systematic review of randomised clinical trials. *Support Care Cancer* 2009; 17(4): 333-7.
20. Anderson J, Taylor A. Effects of healing touch in clinical practice: a systematic review of randomized clinical trials. *J Holist Nurs* 2011; 29(3): 221-8.
21. Jain S, Mills PJ. Biofield therapies: helpful or full of hype? A best evidence synthesis. *Int J Behav Med* 2011; 17(1): 1-16.
22. Anderson J, Taylor A.. Biofield therapies and cancer pain. *Clin J Oncol Nurs* 2012; 16(1): 43-8.
23. Running A, Seright T. Integrative oncology: managing cancer pain with complementary and alternative therapies. *Curr Pain and Headache Rep* 2012; 16(4): 325-31.
24. Coakley A, Barron A. Energy therapies in oncology nursing. *Semin Oncol Nurs* 2012; 28(1): 55-63.
25. Wilkinson D, Knox P, Chatman J. Clinical effectiveness of healing touch. *J Altern and Complement Med* 2002; 8(1): 33-37.
26. Olney C. The effect of therapeutic back massage in hypertensive persons: a preliminary study. *Biol Res Nurs* 2005; 7(2): 98-105.
27. Cambron J, Dexheimer J, Coe P. Changes in blood pressure after various forms of therapeutic massage: a preliminary study. *J Altern Complement Med* 2006; 12(1): 65-70.
28. Kaye AD, Kaye AJ, Swinford J, Baluch A, Bawcom BA, Lambert TJ, Hoover JM. The effect of deep-tissue massage therapy on blood pressure and heart rate. *J Altern Complement Med* 2008; 14(2): 125-8.
29. Post-White J, Kinney M, Savik K, Gau J, Wilcox C, Lerner I. Therapeutic massage and healing touch improve symptoms in cancer. *Integr Cancer Ther* 2003; 2(4): 332-44.
30. Listing M, Krohn M, Liezmnn C, Reissshaauer A, Peters E, Klapp B, Rauhfuß M. The efficacy of classical massage on stress perception and cortisol following primary treatment of breast cancer. *Arch Womens Ment Health* 2010; 13: 165-173.

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