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# Using Reiki to manage pain: a preliminary report

Karin Olson, RN, PhD; John Hanson, MSc

The purpose of this study was to explore the usefulness of Reiki as an adjuvant to opioid therapy in the management of pain. Since no studies in this area could be found, a pilot study was carried out involving 20 volunteers experiencing pain at 55 sites for a variety of reasons, including cancer. All Reiki treatments were provided by a certified second-degree Reiki therapist. Pain was measured using both a visual analogue scale (VAS) and a Likert scale immediately before and after the Reiki treatment. Both instruments showed a highly significant ( $p < 0.0001$ ) reduction in pain following the Reiki treatment.

To date, most research on cancer pain has focused on the use of opioids. Since high doses of opioids frequently aggravate other common symptoms of cancer patients, we are interested in exploring nonpharmacologic adjuvants that may allow control of cancer pain with lower doses of opioids. This study is the first in a series of studies in this new direction.

The purpose of the project was to begin the process of establishing whether Reiki is beneficial in the management of pain in general as a preliminary step in estimating the benefit for individuals experiencing cancer pain. Since no trials evaluating the usefulness of Reiki in the management of pain could

be identified, we decided, in collaboration with pain specialists and our hospital ethics committee, to undertake a study of people from the community experiencing chronic pain. It would have been unethical, in our view, to have conducted a randomized trial of Reiki with a highly vulnerable population (e.g., palliative care patients) in the absence of any data showing Reiki to be of benefit in the management of pain.

Proponents of Reiki, a type of touch therapy, hypothesize that Reiki reestablishes the energy balance in areas of the body experiencing disease and discomfort, thus promoting healing, reducing pain and increasing quality of life. The main feature that distinguishes Reiki from other touch therapies, such as therapeutic touch, is that Reiki therapists have physical contact with the body. Participants in Reiki are fully clothed and may be covered with a blanket if they wish. The treatment, delivered to 18 specific areas of the body, begins with the participant lying on his or her back. The hands are placed on 10 distinct locations on the head and torso. The participant is then asked to lie on his or her stomach (or side, if this is more comfortable), where the hands are placed on 8 additional distinct locations covering the back, hip area and feet. The treatment takes approximately 1.25 hours to complete. No evaluative trials have been re-

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ported, but there are a growing number of reports in the lay and non-peer-reviewed literature on the benefits of Reiki and other touch interventions (see Appendix). Our clinical work with cancer patients indicates that Reiki may enhance the pain-reducing effect of opioids.

### Research question

The research question was formulated as follows: Do individuals experiencing moderate pain obtain a significant reduction in their visual analogue scale (VAS) and Likert (6-point) rating scale pain score following a Reiki treatment?

### Methods

#### Sample

The eligibility criteria were that subjects must be at least 18 years old, not receiving chemotherapy or radiotherapy, be experiencing moderate pain (at least 3 on a VAS [0–10] or 2 on a Likert scale [0–5]), have normal cognitive function, be able to speak, read and write English, and be willing to complete the study rating scales. The sample size necessary was calculated using the binomial distribution with the assumption that 50% of the study participants might be expected to benefit from treatment. The probability of a decrease in pain following treatment in 14 or more cases out of 20 by chance alone is 0.058.<sup>1</sup>

#### Data collection

After clearance from our hospital ethics committee, notices were placed in retail establishments and community centres. Potential participants identified themselves by telephoning the research assistant at a number provided on the recruitment posters. Individuals who met the eligibility criteria and who signed a consent form were scheduled to receive a treatment by a Reiki therapist.

Participants were given 1 treatment by the Reiki therapist in her office. They lay on a massage table fully clothed and, if desired, were also covered with a sheet or blanket. The lights were dimmed, and a candle was lit; soft music played in the background. The environment was consistent through all 20 treatments. A pain VAS ranging from 0 to 10 and a Likert scale ranging from 0 to 5 were completed immediately before and after the Reiki treatment.

### Results

Twenty people were recruited (18 women and 2 men), who ranged in age from 23 to 62 years (mean 44 years). These participants were currently experiencing pain at 55 sites. Ten participants had pain in their upper body and 4 in their lower body. The remaining 6 participants had pain in both the upper and lower parts of their body. Eight participants attributed their pain to bone and muscle problems and 5 participants to chronic illness. Three of the participants included in the chronic illness group had cancer. Six participants had been experiencing pain for 1 year or less, and 7 had been experiencing pain for more than 1 year, up through 7 years. The remaining 7 had been in pain for more than 7 years, 1 for 48 years.

Eighteen participants had asked their physician for help with their pain, and 19 were currently using at least 1 of the following strategies to manage it: analgesic preparations, anti-inflammatory medications, exercise, massage, acupuncture, therapeutic touch, chiropractic, homeopathy, meditation, vitamins, steam, muscle relaxation techniques and Tai Chi.

The correlation between the VAS scores and the Likert scores before the treatment was 0.64 ( $p = 0.0022$ ), and after the treatment it was 0.88 ( $p = 0.0001$ ). There was no relation between active medication use and reduction in pain score following treatment (Kruskal-Wallis,  $p = 0.49$ ). Individuals who had been in pain longer experienced less change in their pain following treatment, but the difference was not significant (Kruskal-Wallis,  $p = 0.87$ ).

As shown in Table 1, 17 participants on the VAS scale and 18 participants on the Likert scale reported a reduction in their pain following treatment ( $p = 0.001$  and 0.0002 respectively). A comparison of the before and after scores using a paired t-test showed a mean decrease in pain scores for the VAS scale of 2.25 and for the Likert scale of 1.25 ( $p < 0.0001$  for each test).

### Discussion

The results of this trial are difficult to interpret. First, the lack of a placebo control group does not allow us to rule out the possibility of a placebo effect. In our next trial we will include a control group, which will receive standard therapy. Second, the duration of the analgesic effect of Reiki was not measured; thus, we could not determine its long-term benefit or the interaction between Reiki and other forms of pain management. Third, the use of music during the intervention may have confounded the findings. Beck<sup>2</sup> and Zimmerman

and colleagues<sup>3</sup> have demonstrated the benefit of music in cancer pain control. Nevertheless, 85% (95% confidence interval [CI]  $\pm$  15.6%) of the participants in the study experienced pain reduction following the Reiki treatment.

The VAS was chosen for use in this study because in other studies of cancer pain it has correlated well with subscales of the McGill Pain Questionnaire.<sup>4</sup> Reliable measurement of pain using the VAS is difficult because the upper end of the scale is anchored with "pain as bad as it can be." If pain tomorrow is worse than anything experienced today, the metric of the VAS is transformed by patient experience. In addition, Dixon and Bird<sup>5</sup> found that patients were more able to reproduce marks near the extreme ends of the scale than marks near the centre of the scale. However, Scott and Huskisson<sup>6</sup> reported that when subjects were provided with their previous pain scores, they were less likely to overestimate the severity of their present pain. Ahles, Ruckdeschel and Blanchard<sup>4</sup> used visual analogue scales to evaluate cancer pain. A total of 37 cancer patients were asked to evaluate their pain 4 times a day for 1 week. The correlation between scores on days 1, 3 and 5 and days 2, 4 and 6 was 0.78.

**Table 1: VAS and Likert scale pain scores before and after 1 Reiki treatment**

Patient	VAS before	VAS after	Likert before	Likert after
1	6	3	2	1
2	2	1	2	1
3	2	0	3	0
4	9	1	3	1
5	3	0	2	0
6	3	2	2	2
7	4	1	2	1
8	5	2	3	1
9	2	2	2	1
10	3	0	2	0
11	5	1	3	1
12	1	0	1.5	0
13	6	4	2	1
14	6	1	2	2
15	4	4	2	1
16	4	1	2	1
17	7	6	4	3
18	2	1	2	1
19	4	3	2	1.5
20	8	8	3.5	3

Because the reliability of VAS is difficult to establish, a number of authors support the use of more than 1 pain measurement strategy. In this study, we measured pain using both a VAS and a 6-point pain intensity scale ranging from 0 (no pain) to 5 (extremely intense, incapacitating pain), as developed by Ahles and colleagues.<sup>4</sup> The significant correlations between the VAS and the Likert-type measures, both before and after the treatment, indicate that the VAS measured pain in a reliable manner in this study. Thus, in our subsequent studies we plan to use only the VAS to measure pain.

Current understanding of the therapeutic effect of touch is limited. Meehan<sup>7</sup> studied the effect of therapeutic touch on postoperative pain. The sample consisted of 108 hospitalized patients who had a least a moderate level of pain following abdominal or pelvic surgery. Patients were randomly assigned to receive 5 minutes of therapeutic touch, or 5 minutes of placebo touch, or narcotic analgesic. Patients in the first 2 groups had the option of requesting an analgesic if the touch intervention was not effective. Pain was measured by means of a VAS 1 hour before and 1 hour after the intervention. The analysis was conducted by people who were blind to the intervention received by each participant. The investigator found that therapeutic touch was only slightly more effective than placebo touch ( $0.05 < p < 0.06$ ); narcotic analgesic was significantly better than therapeutic touch ( $p < 0.001$ ). On the basis of this finding, the author concluded that therapeutic touch should not be the sole intervention used to decrease postoperative pain. The finding that patients in the therapeutic touch group waited a significantly longer time than patients in the placebo control group before requesting an analgesic drug suggests that therapeutic touch may reduce the need for such a drug or may potentiate the effect of an analgesic if it is administered in conjunction with the drug. One limitation of this study was the short time frame during which the intervention was administered. The authors stated that the results may also have been confounded by the ability of those in the placebo touch group to guess that they were not receiving therapeutic touch. This conclusion is supported by the fact that only 4 subjects in the control group reported a reduction in pain. Another possibility is that since the nurses administering the placebo treatment reported feeling guilty about having given an ineffective intervention they may have been somewhat half-hearted in their efforts.

Weinrich and Weinrich<sup>8</sup> studied the effect of therapeutic massage on cancer pain. The sample included 18 male and 10 female hospitalized patients. Pain was

measured by means of a VAS. Patients were paired on the basis of frequency of pain medication. One patient from each pair received Swedish massage to the back for 10 minutes, and the other person did not receive any physical contact, but did receive an informal visit from a data collector for 10 minutes. Pain was measured immediately before and after the intervention, 1 hour after the intervention and 2 hours after it. Data on medication history were also obtained. The men reported a decrease in pain immediately following the massage, but the women did not. There were no significant differences between pre-intervention pain scores and pain scores 1 or 2 hours after the intervention for either men or women in either the experimental or control group. The authors suggested that since medication did not appear to be of benefit until 2 hours after it was administered, massage may be useful in the provision of immediate, short-term pain relief. They also advised that patients be paired on the basis of pre-intervention VAS scores, since it became apparent that the frequency of pain medication did not always correlate well with pain level. In fact, pain level was lower in the control group. The low level of pain in the control group in general and among women in both groups are limitations of the study, making it difficult to determine whether the findings were due to gender or pain level.

Ferrell-Torry and Glick<sup>9</sup> studied the usefulness of therapeutic massage in the reduction of anxiety and self-reported chronic cancer pain, and in relaxation. The sample consisted of 9 male patients. Pain was measured by means of a VAS and anxiety by the State-Trait Anxiety Inventory. Relaxation was assessed according to the following measures: VAS, heart rate, respiratory rate and blood pressure. All variables were measured immediately before the intervention. The physiologic measures were obtained immediately after the massage, and all variables were measured again 10 minutes after the massage had ended. The investigators reported a nonsignificant decrease in self-reported pain and anxiety and an increase in perceived relaxation. There was also a trend showing a reduction in all physiologic measures following the massage. Failure to obtain statistical significance could be related to the small sample. Several potentially confounding factors such as gender, noise level, pain level and other distractions were identified for consideration in future studies.

No discussion of Reiki's mechanism of action has been proposed to date. Given previous writings on pain theories, however, we think that Reiki may have acted in 2 ways to relieve pain in our study participants. The first mechanism is based on the work of Melzak and Wall.<sup>10</sup> Melzak<sup>11</sup> proposed a 3-dimensional model of

pain comprising a sensory component, a motivational-affective component and a cognitive-evaluative component. Peripheral receptors, sensory fibres and the dorsal horns of the spinal cord constitute the sensory component, and the brainstem mechanisms make up the motivational-affective component. Cerebral mechanisms control the cognitive-evaluative component. The sensory component refers to the physical discomfort of pain, whereas the motivational affective aspect refers to the emotional quality of pain (e.g., overwhelming). The cognitive-evaluative component refers to the influences of cultural and social life, personality and situational variables that give rise to the meaning of the pain. Melzak and Wall<sup>10</sup> proposed that a neurophysiologic mechanism in the dorsal horns of the spinal cord acts like a gate, which can increase or decrease the flow of nerve impulses from peripheral fibres to the central nervous system. The degree to which the gate permits increased or decreased transmission is determined by the activity of large-diameter (A-beta) and small-diameter (A-delta and C) fibres, and by descending influences from the brain. Sensory input is therefore modulated at the level of the spinal cord. When transmissions through the gate pass a critical level, pain is experienced and responses are activated. We think that in our study participants, Reiki may have reduced pain by activating the large diameter nerve fibres through distracting stimulation of the skin, thus triggering inhibitory impulses from the brainstem. Then, at the cerebral level, the culturally derived meaning attached to the Reiki touch may have been sufficiently positive to at least balance, if not outweigh, the negative meaning of participants' pain experience before the treatment began.

The second mechanism by which Reiki may have acted to reduce pain in this study is related to coverage of all the main meridians treated in acupuncture. A number of studies suggest that acupuncture may increase circulating endorphins,<sup>12-14</sup> thus decreasing pain perception. Since Reiki covers all the main meridians treated in acupuncture, the treatment provided in our study may have also increased the presence of endorphins, leading to a decreased perception of pain.

We are now preparing a second pilot study of Reiki with cancer patients only, in which we will conduct a randomized trial of analgesic plus Reiki, compared with analgesic alone. The end points will be analgesic in morphine-equivalent units per 24 hours, pain intensity as measured by VAS and quality of life. Level of pain control, relaxation and current analgesic use will be controlled,<sup>8,9</sup> and the environment will exclude music. The purpose of the study is to obtain stable esti-

mates of the means and standard deviations for the outcome variables and to determine whether a large randomized trial is warranted. Other studies are being considered that will compare analgesic plus Reiki with analgesic plus placebo touch, explore the benefits of music and possibly investigate the combined effect of Reiki and music.

## Conclusion

In addition to pain, cancer patients experience many symptoms associated with their disease and treatment, including asthenia, anorexia, nausea and confusional syndromes. Clinical experience has shown that use of opioid analgesics to control cancer pain frequently aggravates these other symptoms. The use of nonpharmacologic interventions, such as Reiki, may make it possible to provide cancer patients with good pain control at lower doses of traditional opioid preparations, thus reducing these symptoms.

This study provides a foundation for continued research on the usefulness of Reiki in pain management in general, and cancer pain management in particular. Other studies have shown that cancer patients choose complementary health care practices more frequently than one might expect and for reasons that are just beginning to be understood.<sup>15-20</sup> The availability of scientific evidence showing the benefits of Reiki, if any, will help health care providers assist patients in deciding whether to use this intervention for pain management.

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**Appendix: Lay and non-peer-reviewed literature on the benefits of touch therapies**

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