Complementary Therapies and Pain Management in HIV/AIDS

Introduction

Despite the advent of highly active anti-retroviral therapy (HAART), pain continues to be a problem in persons with HIV/AIDS. Estimates of pain prevalence in persons with HIV/AIDS ranges from 30-67% (1, 2, 3). The mind, emotions and spirit as well as the body influence the experience of pain, yet the traditional biomedical model often fails to take into account this multidimensional nature of pain. Therefore, although pharmacological interventions remain the mainstay of pain management, complementary therapies also play an important role and expand the healing options available to persons with HIV/AIDS. This article will provide a brief overview of the efficacy and safety of complementary therapies as they are used in pain management. Unless specified, the research described below involves HIV negative individuals.

Terminology and Definitions

What constitutes complementary therapy? The National Center for Complementary and Alternative Medicine (NCCAM), a branch of the National Institutes of Health established in 1998, recognizes 5 major domains of complementary and alternative medicine (CAM). These include: 1) Alternative Medical Systems, such as Traditional Chinese Medicine, Ayurveda, Native American Healing and Homeopathy; 2) Mind-body interventions, such as hypnosis, meditation, music and prayer; 3) biologically based treatments, such as herbs, vitamins and nutraceuticals; 4) manipulative and body-based methods, such as chiropractic and massage; and 5) energy therapies, such as Therapeutic Touch, Reiki, QiGong and Healing Touch (www.nccam.nih.gov).

Alternative Medicine Systems

Traditional Chinese Medicine

Traditional Chinese Medicine (TCM) is a comprehensive, ancient medical system, incorporating diet, herbs, exercise and acupuncture. Most published research focuses only on the use of acupuncture. According to the NIH consensus statement
on acupuncture, data shows that acupuncture has been found to be helpful in the following painful conditions: post-operative pain, headache, tennis elbow, fibromyalgia, osteoarthritis, low back pain, carpal tunnel and myofacial pain (4). In general, most acupuncture studies evaluate effectiveness after weekly treatments for 3-6 weeks.

Specific to persons with HIV/AIDS, electro-acupuncture led to significant improvement in functional activities and pain in persons with HIV-related neuropathy (5). However, this study had a small sample size (N=7) and the acupuncture was given for 20 minutes daily for 30 days. Adherence to such a regimen might be difficult for many patients.

Acupuncture should only be given by licensed acupuncturists who follow the FDA safety standards regarding the use of sterile, single-use needles.

**Body/Mind Therapies**

**Hypnosis**

Many studies of pain management with hypnosis have been reported, however only one related to persons with HIV/AIDS (6). Langenfeld and colleagues reported on five cases of persons with HIV/AIDS who were treated with hypnosis weekly for 11 weeks. At the conclusion of the study, four out of the five reported less pain and used less pain medications compared with pre-hypnosis.

The effectiveness of hypnosis to reduce pain has been shown in other populations, In particular, in persons with metastatic breast cancer (7), post-bone marrow transplant (8), fibromyalgia (9), chronic headaches (10), osteoarthritis (11), irritable bowel pain (12) and surgical pain (13). In general, for hypnosis to be effective for persons with chronic pain, multiple sessions are required with a trained practitioner.

**Relaxation/Guided Imagery**

The use of relaxation and guided imagery is a low-cost intervention which has been shown to reduce pain. Although persons with HIV/AIDS have not been specifically studied, other researchers have found that relaxation and guided imagery can reduce pain in persons with cancer (14, 15), fibromyalgia (16, 17), chronic pain (18, 19), irritable bowel pain (12) and chronic headaches (21).

There are different forms of imagery, some specifically addressing physiological responses, such as promoting a numbing sensation to the painful area. Other forms of imagery might promote relaxation and distraction from the pain, such as imagining a favorite, peaceful place. There are also different forms of relaxation techniques. One form is considered passive, progressive muscle relaxation, where the patient is instructed to allow the muscle tension to leave each part of the body. Another form of relaxation encourages active muscle tensing and releasing. There is some amount of trial and error needed to determine which style of relaxation and imagery is most effective for a given patient and patients without prior experience in these strategies rarely choose them for pain management (22). Optimal candidates are those who, though in distress, are still able and willing to learn new skills (23).

**Meditation**

There are many different types of meditation and each involves the focusing of one's attention. The object of one's attention varies, but it might be the breath, a mantra, a sound, or a symbol. Regular, ongoing meditation has been found to help patients cope with a wide range of clinical problems, including pain (24, 25). Several studies of mindfulness meditation have demonstrated a reduction of the perception of pain as well as reduction in the need for analgesics (26, 27). The mindfulness meditation program uses a form of meditation that focuses on the breath, but also includes walking meditation and gentle yoga stretches.

**Music Therapy**

Throughout history music has been used for therapeutic purposes. Listening to music twice a day for 45 minutes has been found to decrease pain by nearly 80% in a small study of fifteen persons with cancer (28). Kane and colleagues (29) found that relaxing music decreases pain intensity after wound care. Music also decreases chronic pain intensity in elderly persons with osteoarthritis (30). In this last study, patients chose the music they wished to hear and listened for 20 minutes daily for 14 days. Long-term studies on the therapeutic effect of music on pain are lacking.
Music permits the patient to assume some responsibility and control over his/her body, as well as providing a diversional stimulus. Listening to music is low-cost, convenient and does not require lengthy training.

**Biologically Based Treatment**

**Aromatherapy**

Aromatherapy is the therapeutic use of essential oils. Essential oils can be administered in several ways, with the two most common being direct inhalation and topical application. In one study, the inhalation of lavender essential oil decreased pain intensity following wound care (29). In another, the topical application of roman chamomile essential oil significantly decreased pain in persons with metastatic cancer who were treated weekly for 3 weeks (31). The combination of roman chamomile with lavender applied topically in a massage reduced the analgesic needs in HIV+ children, with some children saying their pain was completely relieved (32).

Aromatherapy is widely available and easy to use. The main adverse reaction is contact dermatitis, which occurs rarely and usually develops following heavy, regular topical use. For sensitive individuals, a patch test can be done. This involves placing the intended oil on a bandaid and applying it to the skin for twenty-four hours. Should redness develop, the oil should not be used topically.

**Neutraceuticals**

**Capsaicin**—Capsaicin is a substance derived from hot peppers and is usually found in a cream or ointment. A meta-analysis showed topical capsaicin to relieve non-HIV related neuropathic or postherpetic pain significantly greater than placebo (33). However, a small trial of persons with HIV-related neuropathy found no difference with regard to pain relief (34). The latter study had a high drop-out rate related to the intense burning caused by the capsaicin cream, which might explain the findings.

Patient teaching is important when using capsaicin. Patients should be taught to use gloves during application. It is difficult to remove the capsaicin completely from the hands with normal washing and irritation of the mucous membranes could develop from rubbing the eyes etc. Patients can be told that the intense burning will wear off after several days of use. In addition, not every patient experiences intense burning when using capsaicin cream. Capsaicin is not to be applied to open or broken skin.

**Glucosamine/chondroitin**—Glucosamine and chondroitin have been found to be effective nutritional supplements for the control of osteoarthritis pain. A meta-analysis of randomized, placebo-controlled clinical trials of glucosamine and chondroitin found that both pain and mobility improved with use and that safety was excellent for both (35). The usual dosage for glucosamine is 750 mg twice a day and for chondroitin, 600 mg twice a day. One notable adverse drug interaction is the augmentation of warfarin by both supplements (36), requiring close monitoring by the clinician.

**Manipulative and Body-Based Methods**

**Massage Therapy**

There has been a great deal of research demonstrating the benefit of massage in reducing musculoskeletal pain. In one study of patients with low back pain, 30 minutes of massage twice a week for five weeks significantly reduced pain, depression and anxiety (37). Massage has also been found to reduce pain in persons with cancer (38, 39, 40). Most of these studies, however, looked at a one-time effect of massage on pain control.

One interesting study compared the effects of massage with relaxation during treatment and at a 3 month follow-up (41). In this study, patients in the massage group received a 30 minute massage, 1-3 times a week for 6-10 sessions. Patients in the relaxation group were instructed to listen to a progressive relaxation audi-tape twice a week for five weeks. During the treatment period, the massage group showed greater reduction in pain than the relaxation group. However, at a 3 month follow-up, there was a significant worsening of pain in the massage group compared with no change in the relaxation group. It is possible that the passivity involved with massage precluded the learning of active, coping techniques learned by those in the relaxation group. A combination would likely prove beneficial.

**Reflexology**
Reflexology involves the application of pressure to specific points on the feet or hands that are believed to correspond to other parts of the body. Treatments generally last from 30-60 minutes and may be part of a 4-8 week protocol of therapy. Stephenson and colleagues (42) found that after a single 30 minute reflexology treatment, pain and anxiety were significantly reduced in a small sample of persons with cancer. Again, long-term studies are lacking.

**Yoga**

Yoga has been shown to significantly reduce pain in persons with carpal tunnel syndrome when compared to patients using wrist splints (43). In this study, patients were given twice weekly yoga instruction, consisting of 11 yoga postures specific to strengthening and stretching the upper body, for eight weeks.

Williams and colleagues (44) found that 16 weeks of yoga caused a 65% decrease in pain intensity and 88% decrease in pain medication among patients with low back pain. This study is particularly impressive since study patients had back pain for a mean of 11 years and results were maintained at a 3 month follow-up assessment.

**Energy Therapies**

**Reiki**

Reiki is an ancient, non-invasive, Japanese energy healing technique. In a preliminary report on the use of Reiki for HIV-related pain, Reiki was found to decrease both pain and anxiety after a single 20 minute treatment (45). In this study, the types of pain included neuropathy, myalgias and headaches. There was no follow-up to determine how long pain relief lasted.

Reiki has also been found to reduce pain in cancer patients (46). In this study, patients received two 1.5 hour treatments on days 1 and 4 of the seven day study. Although pain reduction was reported, no difference in analgesic use was noted.

**Therapeutic Touch**

Therapeutic touch is another non-invasive energy healing technique, derived from the East Indian Vedic cultural tradition, which has been taught to health care professionals for over 30 years (47). Daily or weekly treatments have been studied, with the length of treatment varying from 5 to 15 minutes. Therapeutic touch has been found to reduce pain from burns (48), arthritis (49, 50), fibromyalgia (51) and headaches (52).

In most cases, ongoing therapeutic touch treatments are necessary to sustain an effect in terms of chronic pain management. Since therapeutic touch can be taught to lay persons, it is possible for caregivers to learn to give treatments and allow for ongoing healing at home.

**Conclusions**

Although most complementary therapies are not covered by health insurance, many of the techniques, such as aromatherapy and music are easily affordable. Meditation and relaxation techniques, once learned, cost nothing for the patient to continue to practice. Many nurses now incorporate Reiki and therapeutic touch in their practice and offer it to hospitalized inpatients. Schools of oriental medicine often have low-cost acupuncture clinics.

Persons with HIV/AIDS are interested in CAM therapies and practitioners are learning more about them. A growing number of hospitals offer them to either inpatients, outpatients or both. Further research is needed to determine the long-term benefits of CAM and to investigate its safety. In particular, it is important to know if herbs and other supplements interact with HAART. With this in mind, many CAM therapies can be used to improve and enhance current pain management options for persons with HIV/AIDS.

**Author**

Gayle Newshan, PhD, NP, is the Director of the Holistic Care Department at St. John’s Riverside Hospital. She is certified in aromatherapy, guided imagery and hypnotherapy and is a qualified therapeutic touch practitioner. Dr. Newshan’s research has focused on pain in the person with HIV/AIDS and chemical dependence. Her clinical practice involves treating persons with pain using both pharmacological and CAM modalities. She has been working with persons in pain for over 20 years and has published and lectured extensively on the topic.
References


Continuing Education Test

HIV Medical Alert June 2005 Vol. 9 Issue No. 2
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To earn credit:
1. Read the CME article.
2. Review the objectives
3. Study and apply the content to the objectives and to your practice.
4. Complete the Post-Test.
5. Return the answer sheet as directed at the bottom of the evaluation page.

Note: This CME activity and quiz is designated for 1 credit. (Expires June 2006.)

Objectives—At the conclusion of this activity, the learner will be able to:
1. Discuss the efficacy and safety of complementary therapies when used in pain management.
2. Determine appropriate complementary therapies and pain management modalities to use in HIV/AIDS care.

Select the best answer for each of the following

1) Complementary and alternative therapies have little scientific evidence to support their use in clinical practice.
   □ a. True
   □ b. False

2) If a patient is taking warfarin (coumadin), caution is needed prior to recommending the following:
   □ a. Yoga
   □ b. Massage
   □ c. Glucosamine and chondroitin
   □ d. Capsaicin ointment

3) Which of the following can be recommended for headaches:
   □ a. Relaxation and guided imagery
   □ b. Therapeutic touch
   □ c. Promote adherence to oral health care providers recommendations.
   □ d. Acupuncture
   □ c. All of the above.

4) A patient with chronic low back pain is interested in reflexology. You tell him:
   □ a. Massage is a better choice for chronic back pain
   □ b. Studies show that regular yoga is more beneficial for low back pain
   □ c. Back surgery is his best option
   □ d. Reflexology should be very helpful.

5) Gloves should be worn when applying capsaicin ointment:
   □ a. Only in persons with HIV because of universal precautions
   □ b. To avoid contact dermatitis
   □ c. Because it is difficult to wash off the hands and can be irritating to mucous membrane
   □ d. All of the above
**Evaluation of CME Activity**

**Complementary Therapies and Pain Management in HIV/AIDS**

**Overall Activity**

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**PLEASE PRINT CLEARLY TO ASSURE ACCURATE DOCUMENTATION OF CME CREDIT**

**Profession:** ☐ Physician ☐ PA ☐ NP ☐ CNM ☐ RN ☐ LPN ☐ Other _________________________________

**Name:** ____________________________________________ County: ____________________________

**Organization:** _____________________________________________________________

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(please sign legibly for CME records)

**Return the completed test and evaluation form to:**
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Upper Hudson Primary Care Consortium
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