The Mae On Project: using acupuncture for HIV symptom relief in Northern Thailand

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Introduction

Maintaining a sustainable quality of life (QoL) and addressing physical, emotional, mental and spiritual needs for people living with HIV/AIDS (PLWHA) remains a constant challenge for healthcare providers. This is particularly true of developing regions where access to appropriate treatment and support is often limited. In developed countries, orthodox medicine – sometimes known as the allopathic approach – is the first intervention of choice. This is sometimes followed by a trial of complementary and alternative medicines (CAM) determined by the patient. Allopathic methods and CAM are often used together and are part of an integrated approach to healthcare [1]. Elsewhere, care choice is shaped more by local health beliefs, cost and the willingness of practitioners from allopathic and alternative approaches to work together.

This paper will discuss an innovative project in rural northern Thailand, where allopathic treatments including antiretroviral therapy (ART) exist in tandem with a well-organised and effective programme of acupuncture. Evaluations from the project suggest that an integrated approach to symptom relief provides key benefits for PLWHA in resource-poor regions. These also demonstrate the feasibility of using local healthcare staff and developing such a program with sensitivity.

Background

Complementary and alternative medicine

The use of CAM remains controversial in the context of allopathic medicine. Empirical evidence demonstrating a positive effect is sparse for certain interventions. From a 'Western' medical perspective, it is tempting to group all non-allopathic interventions together but to do so is incorrect. The numerous alternative approaches are underpinned by a vast range of belief systems and can include traditional African medicine, homeopathy, Ayurveda (traditional Indian medicine) and traditional Chinese medicine (TCM), all significantly different modalities whose only common feature is that they are not orthodox. Controversy rages around actual benefits [2] but there can be no doubt that patients do report improvements for certain symptoms. The growing popularity of alternative therapies in developed countries and increasing respect for non-allopathic paradigms in other regions suggest that it would be foolhardy not to explore the issue further. In the context of HIV care, there are several reviews examining the benefits of CAM [2–5].

Acupuncture

Acupuncture is one of many healing modalities used in TCM. This holistic system of medicine has a long history of preventing and treating disease and enhancing the immune system. It is based on the flow of *Qi* or life energy along the pathways of the body called meridians. When imbalances or blockages of this energy occur, pain and illness result. Acupuncture consists of inserting and manipulating hair-thin needles in selected points on the body to remove blockages and re-establish the normal flow of *Qi* through the meridians. In this way, it returns harmony to the body, restoring function, relieving pain and thereby treating underlying illnesses. Of all the alternative approaches to treatment, acupuncture is often cited as the intervention with the most obvious (and proven) benefit. This was a prime motivator for the development of the Mae On Project.

Acupuncture is a potentially useful treatment for improving the symptoms of chronic HIV infection and the side effects of ART among PLWHA. There is evidence that it reduces the severity of symptoms such as peripheral neuropathy [6] and general malaise [7], and that it also improves sleep quality [8]. Although there are often cultural barriers to using CAM [9], evidence for its benefits is compelling in the context of certain illnesses, for general palliative care and specifically in the care and support of people living with HIV [10].

Thailand

Although classed by many as a developing country, Thailand is more realistically 'middle income'. Its gross domestic product per capita (GDP) was $7600 in 2003, much more than Laos ($1759) or Uganda ($1457) but much lower than the UK ($27,147) or Norway, the highest ranked country ($37,650) [11]. The population of Thailand is approximately 65 million. HIV infection cases numbered 540,000 or 1.5% of the adult population at the end of 2005, with 112,000 people reporting advanced (symptomatic) HIV disease [12]. About 45% of those with advanced disease have access to ART.

The Mae On Project

The Mae On district is located in northern Thailand, close to the city of Chiang Mai. Mae On Hospital is a rural community facility serving a population of approximately 20,000.

The Mae On Project began in April 2004 and had three main objectives: to develop a program to train medical staff in acupuncture as adjunctive treatment for PLWHA at Mae On Hospital; to develop a free clinic at Mae On Hospital to provide acupuncture for PLWHA; and to undertake an evaluative study using quantitative and qualitative data to assess the efficacy of the intervention on QoL, the symptoms of chronic HIV infection and the side effects of ART.

Setting up the clinic

The acupuncture clinic was established with the cooperation and support of Mae On Hospital. Two Thai nurses volunteered for training in acupuncture; both had obtained their Bachelor of Science degrees in nursing and were keen to develop their skills in a completely new direction. The nurses received 110 hours of didactic training in acupuncture over a 4.5-month period, and 6 months of supervised clinical training in a weekly acupuncture clinic for PLWHA. Training was provided by three TCM practitioners and the nurses were able to perform acupuncture on the opening day of the clinic. During the first 3 months of clinical training, they quickly learned how to conduct a basic TCM interview, make a diagnosis and design a treatment plan.

Once the clinic opened, 32 PLWHA at various stages of HIV-infection regularly attended weekly acupuncture treatments in a group out-patient setting. Standard TCM tongue and pulse assessments were recorded for each participant on every acupuncture visit. The acupuncture points used were based on the principles of TCM as well as each participant's individual clinical presentation. Each treatment was personalised over the course of the study to accommodate the individual's changing symptoms and health concerns.

Treatment consisted of ear and body acupuncture as well as indirect moxibustion, electro-acupuncture and tui na massage, three complementary therapies often used as adjuncts to acupuncture to enhance efficacy (see Glossary). Disposable and sterile acupuncture needles were used on all subjects.

Evaluation

How effective was the acupuncture? Given the controversy surrounding all interventions of this type, it was vital to undertake some form of evaluation. A non-randomised, single-arm study was carried out over a 6-month period, for which 27 HIV-positive participants with stable medication use and no significant morbidities were enrolled. Participants were invited to take part through local HIV/AIDS health-care providers in the Mae On and neighbouring Sangkhampaeng and Doi Saket districts. Of the participants, 68% had a diagnosis of AIDS and 19% were asymptomatic. The mean age of participants was 35.9 years; 74% were women, and 78% were on ART. The mean period since HIV infection was 6.1 years and the mean period since AIDS diagnosis was 1.4 years.

All participants gave informed consent (in the Thai language) and clearly understood access to the treatment was not determined by their willingness to participate in the study. Data were collected using repeated pre- and post-acupuncture questionnaires that included the QoL scale and the Memorial Symptom Assessment Scale (MSAS) [13]. The pre-acupuncture questionnaires were administered three times before initiation of treatment (at enrolment, and at 3 and 6 months thereafter). The post-acupuncture questionnaires were administered during acupuncture treatment at 2, 4 and 6 months.

These quantitative tools were supplemented with qualitative, semi-structured exit interviews conducted with participants to evaluate the efficacy of acupuncture on physical symptoms and QoL. These took between 40 and 60 minutes and were tape-recorded. A native English speaker, United Nations-certified in translation and interpretation of the Thai language, conducted the interviews in Thai. These were comprised of closed and open-ended questions and informal conversation.

Results from the evaluation were intriguing: no significant changes in QoL were apparent from the questionnaire scores, but 17 participants already treated with ART reported a significant decrease in pain ($P=0.01$) after acupuncture treatment. Comments from the interviews confirmed that 96% of participants reported improvement in symptoms such as pain, peripheral neuropathy, dizziness and frequency of upper respiratory infections; 89% stated improvement in sense of wellness and emotional wellbeing; and 48% reported an increased ability to work more, thereby decreasing financial worries.

Here are some examples of patients' comments:

> 'Prior to having acupuncture I was aware of the symptoms and this would cause me some stress. But now that these symptoms have eased, almost gone, I don't think about this anymore and consequently feel emotionally and spiritually better. And I can also look to the future with greater hope because I don't have to worry about these symptoms anymore.'

> 'Since doing acupuncture I really firmly believe my life has improved. My physical symptoms are all gone … [I have] more concentration … I feel that my health is better than those who don't have HIV. I feel it's a combination of antiretrovirals and acupuncture.'

'Acupuncture increases my hopes and aspirations and gives me encouragement, strengthens me. I have something to lean on. If I don't come here, I feel like I've left something out of my life.'

Discussion

Overall, the findings of the evaluation suggest that acupuncture may be beneficial to people living with HIV in this rural region, improving physical symptoms and QoL. Apparent differences found between the quantitative and qualitative data may be due to several factors. In reviewing the questionnaires at the end of the study, it was recognised that they were culturally inappropriate, written beyond the educational level of participants or potentially misunderstood. In addition, other non-controlled factors could have affected the MSAS and QoL scales. These factors include nutritional status, social factors, economic livelihood and psychological wellbeing.

By contrast, interview data may be a better tool for capturing the results of acupuncture in this population. Data showed a cascade effect of acupuncture on QoL. For example, many participants commented on how acupuncture decreased their physical symptoms, which allowed them to work more. This in turn enabled them to earn more money, thus reducing finance-related stress and leading to greater opportunities to participate in community and social life.

Conclusion

The Mae On Project demonstrates the feasibility of establishing and maintaining a hospital-based acupuncture clinic for PLWHA in a rural area. The project drew on local nursing expertise, and confirmed that acupuncture was acceptable to this population, with many participants requesting that similar clinics be started in other districts to accommodate those PLWHA who were unable to travel to the Mae On Hospital. The director of Mae On Hospital and the head nurse of the HIV/AIDS program expressed great satisfaction with the acupuncture program, requesting training for more nurses. The acupuncture clinic continues to run on a weekly basis at the Mae On Hospital and has a waiting list for new patients.

Acupuncture has important benefits for this resource-poor area. It is well tolerated and safe, with no adverse complications reported. Acupuncture has no side effects if used correctly, and treatments can be planned around the availability of hospital staff, and the patient's work/life schedule. It is cost-effective and has no interactions with allopathic medications, including ART. The average cost of a weekly acupuncture treatment for one participant was approximately $1.45, translating to about $6 per month per patient. Many clients commented that they experienced improved appetite, better sleep, less stress and more energy, even though they were not treated directly for these conditions. This suggests that the Mae On project has proven to be a vital resource in the care and support of PLWHA in this region.

Glossary

Electro-acupuncture involves the application of low voltage electricity to inserted acupuncture needles to improve the function of the affected neuromuscular system.

Moxibustion is the use of burning herbs (Artemisia vulgaris) to prevent and treat disease by warming acupuncture points. Moxibustion has the ability to help decrease the main digestion-related deficiencies of spleen and stomach caused by HIV. It is also used to dispel dampness and cold, and to stimulate the flow of *Qi* so that the organ systems are nourished and work in harmony.

Tui Na Massage is an ancient Chinese massage technique that is used to promote the flow of *Qi* and blood in the body.

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