The role of complementary therapies in cardiac care: Where are we now?

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Table 1. Reasons for the growing interest in complementary therapies

<table>
<thead>
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<th>Reason</th>
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<td>Recognition of the potential benefits of these therapies</td>
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<td>Increasing dissatisfaction with the traditional western medical model</td>
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<td>Increasing expectation for a more holistic approach to care</td>
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<td>Quality of life issues</td>
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<td>Desire for more involvement and decision-making in the treatment process</td>
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<td>Clients’ expectation of better communication with practitioners</td>
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<td>Adoption of a particular healing system that is compatible with a cultural background</td>
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From: Archer (1999), Fontaine (2005)

Complementary medicine (sometimes referred to as complementary and alternative medicine or holistic therapy) is expanding rapidly. Nurses and other health professionals have attempted to integrate therapies such as acupuncture, homeopathy, massage into mainstream medicine to provide a more holistic approach to treatment and patient care (Richter et al, 1991; Kondrot et al, 2000; McNamara et al, 2003). The World Health Organization (2002) defines complementary and alternative medicine as ‘a broad set of health practices that are not part of a country’s own tradition, or not integrated into its dominant healthcare system’. Currently, a variety of terms are used interchangeably for complementary and alternative medicine and these include ‘complementary medicine’, ‘complementary therapy’, ‘alternative medicine’, ‘alternative therapy’, ‘holistic therapy’, or ‘complementary and alternative therapy’. The term complementary is preferred by some as it conveys a therapy that is used as an adjunct to western therapies, whereas the term alternative indicates a therapy that is used in place of a western medicine approach. More recently, the term integrative medicine is being used to indicate that the care provided is a blend of western medicine, complementary therapies, and therapies from other healthcare systems (Snyder, 2002).

The growing interest in complementary and alternative therapies

There has been a growing interest in the use of complementary therapies (Table 1). One of the reasons for this is an increasing level of dissatisfaction with the western medical model and the drawbacks and side-effects that are sometimes associated with western medicine (Fontaine, 2005). Western medicine provides many remedies for the problems and diseases that people encounter throughout their lives by concentrating on the illness. Complementary therapies treat the whole patient rather than a particular disease process. They focus on the holistic care of the individual and place a particular emphasis on patient involvement. Although complementary therapies represent different treatment approaches, they have common attributes. Mental, emotional, spiritual, relationship, and environmental components of well-being are considered to play a

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- Cardiovascular
- Complementary therapies

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vital role in a person’s state of health. Many of the therapies also incorporate the belief that an internal self-healing process exists within the person. Individuals should be responsible for making their own decisions regarding their health, and nature, time, and patience are the great healers (Fontaine, 2005).

Recent advances in therapeutics and a growing integration of complementary therapies into cardiac care has led to many patients using some form of complementary medicine. For example, a recent survey found that approximately 70% of respondents with cardiovascular problems were using some form of complementary medicine (Oz, 2004). With the increase in popularity of integrating complementary therapies into mainstream medicine, it is important to consider ways in which complementary therapies can be used to promote cardiac health.

In the United States, the National Center for Complementary and Alternative Medicine (NCCAM) (2005), the Federal Government’s leading agency for scientific research on complementary therapies, is dedicated to exploring complementary and alternative healing practices in the context of rigorous science, training researchers, and disseminating authoritative information to the public and professionals.

In Europe the status of complementary therapies varies. In the Netherlands, Germany, Denmark and Sweden, non-conventional medicine can be practised within certain limits. However, in other European countries such as France, Belgium and Luxembourg, only the medical profession is entitled to practice healthcare and treat diseases. In 1994, the European Parliament’s Committee on the Environment, Public Health and Consumer Protection published a report that sought to establish the principle of plurality in medicine through the regulation and recognition of complementary medicine. This report increases the accessibility to complementary medicine and a wide range of healthcare products such as complementary medicine, herbs and food supplements for European citizens (Trevelyan, 1998).

Complementary therapies in cardiac care

Although hundreds of complementary therapies have been categorized as non-conventional, not all of them have a direct or indirect impact on cardiac care. The NCCAM (2005) has classified these multiple therapies and systems of care into five categories: energy therapies, alternative medical systems, biologically based therapies, mind-body interventions and manipulative and body-based methods.

Energy therapies

Fontaine (2005) describes energy as the force that integrates the body, mind, and spirit. It is described as Qi from the Chinese perspective (Figure 1) or Prana in the Indian philosophy and healing system (Quinn, 2002). It is believed that energy flows in the body along channels called meridians and collaterals, which connect all body organs and tissues. When Qi is abundant, flowing freely, and is balanced, a person is healthy. However, when Qi becomes deficient, excessive, or is associated with stagnation or blockages in a number of body parts, the equilibrium of the body is lost and diseases may develop (Londorf and Winn, 2000). Energy therapies incorporate the energy emanating from within the body, or energy coming from external sources. For example, Qigong aims to promote a good circulation of energy in the body using a series of exercises which include breathing, meditation, and rhythmic movements. Such exercise helps to clear up the blockage, allow Qi to flow, thereby helping to balance its flow in the body. Since Qi is the potential energy driving the flow of blood, when it flows smoothly and easily, blood will also flow smoothly. This may explain why Qigong exercise increases blood circulation and has been found to be beneficial for many cardiovascular conditions. For example, previous studies have evaluated the effects of Qigong on hypertensive patients and have reported that receiving Qi positively affects blood pressure, catecholamine and cholesterol levels, and heart rate (Lee et al, 2004).

Nurses have been using energy therapies, such as therapeutic touch, for many years. During therapeutic touch the therapist places his/her hands on or near the patient’s body to direct the flow of energy for healing purposes. A number of cardiovascular effects have been observed, such as increased haemoglobin levels in hospitalized adults (Oliver, 2006). Therapeutic touch has also been shown to reduce the levels of anxiety in cardiovascular patients (Quinn, 1984). However, many studies of therapeutic touch have small sample sizes, thereby putting researchers at higher risk of committing type II errors
the acceptance of a null hypotheses that is actually false (Graney, 2001).

**Alternative medical systems**

Alternative medical systems are systems of care that have been developed differently to the western biomedical approach. Acupuncture and homeopathy are placed under this category because both these therapies adopt a very different approach to treatment to that of mainstream medicine.

**Acupuncture**

Acupuncture forms a large part of traditional Chinese medicine and there has been an increased acceptance and incorporation of acupuncture within traditional western medicine over the decades (Yang, 2002). The British Medical Association accepts acupuncture as a discrete clinical discipline, and WHO also recognizes the effectiveness of acupuncture in the treatment of over 40 different diseases (Downey, 2001). There is an increasing body of evidence which demonstrates that acupuncture has a number of specific benefits for many cardiovascular conditions. In a clinical trial conducted by Ballegaard et al (1993), it was concluded that acupuncture has a modulatory effect on skin blood flow, heart rate and blood pressure. There is also more evidence demonstrating that acupuncture could appreciably reduce the number of anginal attacks experienced by patients with angina pectoris (Richter et al, 1991) and it can also be used to treat hypertension (Rao, 2000).

**Homeopathy**

Homeopathy, on the other hand, is a therapeutic system that triggers the self-healing system of the body using small doses of remedies or medicines. The basis of homeopathy was guided by the principles of The Law of Similars, potentization and whole-person prescribing, and was originally proposed by Dr Samuel Hahnemann (Fontaine, 2005).

**The Law of Similars**

The Law of Similars’ claims that a natural substance that produces a given symptom in a healthy person when taken in large amounts can, when used in smaller doses, cure people who have similar symptoms.

**Potentization**

The principle of potentization indicates that the greater the dilution of a curative product, the more effective it becomes.

**Whole person prescribing**

The principle of whole-person prescribing implies that each person is unique and reacts differently to the same disorder. The treatment approach should take into consideration the person’s personality, mood, temperament, physical and emotional health and living conditions (Fontaine, 2005).

Homeopathy is considered to be one of the better therapies for many conditions, including cardiovascular problems such as angina pectoris, arrhythmias, and various heart diseases (Balakrishnan, 1996; Kondrot et al, 2000). It is also a valuable adjunctive therapy for conditions such as cerebrovascular accident (Kondrot et al, 2000), or hypertension (Balakrishnan, 1996). However, many of these studies are based on case studies and homeopathy trials were less often explicitly randomized. More, well-established clinical trials are therefore needed to establish scientific evidence for this therapy.

**Biologically-based therapies**

Biologically-based therapies are made up of substances that are found in nature. Such therapies include aromatherapy, herbal medicine, and certain biologically-based products, some of which are associated with cardiac health.

**Aromatherapy**

Aromatherapy, the use of essential oils extracted from plants, has increased in popularity in recent years. Many nurses and other health professionals have been receiving training in aromatherapy to widen the scope of care they can provide (Buckle, 2000; Price, 1999). Studies have shown that neroli could benefit people suffering from palpitations, coronary artery spasm (Valnet, 1982) or arrhythmias after cardiac surgery (Tisserand, 1988). *Lavandula angustifolia* (true lavender) can be used for borderline hypertension, while *Lavandula latifolia* (spike lavender) can be useful in cases of transient hypotension caused by some antidepressants (Buckle, 2002).

**Herbal medicine**

On the other hand, herbal medicine continues to occupy a central position in many healing traditions in the world. It includes the use of single herbs in many western traditions, as well herbal mixtures in other, more traditional, systems such as herbal medicine originating from China, Ayurvedic medicine from India, and Kampo from Japan (Ernst, 2001; Plotnikoff, 2002). There are many well known examples of herbs used in cardiac treatments and these include digitalis (from the foxglove), aspirin (from willow and meadowsweet), and ephedrine (from the Chinese plant *Ephedra*) (Busby, 2001). Moreover, various biologically-based products were reported to have an effect on treating hypertension. These include the consumption of supplements such as calcium, vitamin C, CoEnzyme Q10 (CoQ10) and fish oils. Another approach includes the adoption of a diet adapted for particular conditions. One of these is the Dietary Approaches to Stop Hypertension Trial (DASH) diet (Tomas, 2003). However, findings on the effectiveness of these products on cardiovascular health remains controversial. More randomized, double-blind, placebo-controlled trials are needed before herbal medicines are more widely accepted by the conventional medical system and are successfully integrated into western clinical applications.
Mind-body interventions

Mind-body interventions encompass therapies that promote the mind’s capacity to regulate body functions and relieve symptoms. Since emotions are closely linked with one’s mind and feelings, mind-body interventions could address the physical, psychological, and spiritual needs of a person and promote his/her cardiac health in a holistic way. An increasing body of evidence showing the effectiveness of these therapies provides the basis for their use in managing cardiovascular conditions.

Hypnosis

Hypnosis has been used as an adjunctive therapy in treating heart disease (Doran, 1991). It can be used as a psychotherapeutic approach to relieve anxiety before and during angioplasty (Weinstein and Au, 1991) and coronary artery bypass surgery (Greenleaf et al, 1992), during episodes of cardiac arrhythmias (Saichuk, 2000) and for lowering high blood pressure (Borckardt, 2002; Watanabe et al, 1996).

Biofeedback

Biofeedback is a method of training which enables a person, mostly with the assistance of electrical equipment, to learn to control a number of the body’s physiological responses (Bray, 2001; Fontaine, 2005). It has been found that patients with advanced heart failure can use biofeedback to voluntarily control regional blood flow, decrease vascular resistance, and increase cardiac output (Moser, 1997).

Music

Evidence has also shown that music could modify heart rate variability (White, 1999) and effectively reduce stress in patients who have experienced a myocardial infarction (Bolwerk, 1990). Findings of another study also support the hypothesis that music enhances general mood among coronary artery bypass graft patients while they are exercising in a cardiac rehabilitation phase 2 programme (Murrock, 2002). Such observation has implications for nursing practice as it provides evidence supporting the use of music as a strategy to increase the patient’s enjoyment of the exercise session and promote exercise compliance.

Manipulative and body-based methods

Manipulative and body-based therapies are based on the principles of manipulating and/or moving body part(s). There is increasing evidence supporting the use of manipulative and body-based therapies such as massage and Tai Chi for cardiovascular disorders (Figure 2). It has been demonstrated that a 20-minute back massage appeared to reduce systolic blood pressure in patients awaiting a diagnostic cardiac catheterization (McNamara et al, 2003). In addition, massage therapy, given over a specified time period, could normalize blood pressure and restore proper haemodynamics in participants with arterial hypertension (Hernandez-Reif et al, 2000, Prilutsky, 2003).

Regular Tai Chi practice can help maintain a good blood supply to the heart and coronary arteries. Tai chi can also maintain the strength of the heart’s systole and help strengthen and support the blood’s movement and cardiovascular processes (Liu and Morgan, 2000). Evidence shows that Tai Chi is an effective treatment for many cardiovascular ailments, including heart disease and arteriosclerosis (Lai et al, 1995; Fontana et al, 2000), and is effective in lowering blood pressure (Wolf et al, 1996). An initial skepticism about the value of this exercise may be related to a sense of peace associated with participation, and a sense of energy source from within the body (Fontana et al, 2000). Overall, practising Tai Chi appropriately has various benefits and it is highly recommended as an excellent health promotion strategy and an additional form of aerobic exercise for many people (Taylor-Pillai and Froelicher, 2004).

Future directions

The increased use of complementary therapies in recent years has been accompanied by an increasing level of skepticism about their underlying principles, effectiveness and safety. The successful integration of complementary medicine into mainstream medicine requires separate registers and codes of professional conduct for each individual therapy (Walker and Budd, 2002). Unfortunately, a high proportion of complementary therapists are unregulated and in the UK there is no legislation that restricts the practice of complementary therapies, apart from the practice of chiropractic therapy and osteopathy. A recent House of Lords report on complementary therapies has recommended that many practitioners, such as those working in herbal medicine and acupuncture, should also develop a system of statutory regulation (Walker and Budd, 2002). It is important that each individual group of therapists should determine its own aspirations, practice, and regulating structures to protect the public’s interests. It is also important for the relevant bodies to establish clear guidelines regarding the achievement of either self- or statutory regulation (Walker and Budd, 2002).

Barriers

There are a number of barriers that hinder the wider use of complementary therapies. Many people have an inadequate level of knowledge about the subject and this makes them less likely to consider such therapies. They may also be unsure about where to find competent practitioners. Further to this, the lack of scientific evidence to support the effectiveness of therapies can also act as a barrier to people adopting these approaches.

Improving the evidence

Many studies, as mentioned above, have limitations such as a small sample size and the lack of an equivalent placebo-control group to establish a strong causal relationship. Further randomized studies that include more objective measures, large sample sizes, and long-term follow-up are needed to validate the promising results already
reported on complementary therapies used by patients with cardiovascular disorders. Research could be extended to evaluate the effect of including complementary therapies into mainstream medical practice. It could also evaluate the development of a multifaceted program that selectively incorporates various types of therapies from different domains into the area of cardiac care.

**Education**
Many currently practicing nurses have a limited level of knowledge about how to address the issue of complementary therapies (Cueller et al, 2003). Many educational institutions have recognized the need to include them in the curriculum. This will help prepare health professionals for educating patients in the use of complementary therapies in different healthcare settings. The increased level of knowledge among health professionals may bring about a more open and positive attitude toward these treatment options. This awareness may help promote a culture where patients feel comfortable disclosing their use of complementary therapies and this will allow professionals to monitor for adverse drug effects and/or interactions, thereby enabling them to deliver culturally competent care. An updated list of qualified practitioners of individual therapy should be provided by the government so that the public and healthcare providers can gain access to competent practitioners when considering these therapies as additional treatment options.

**Conclusions**
Previous evidence has demonstrated that complementary therapies have promising effects on many cardiovascular conditions. There is no doubt that the increasing integration of complementary therapies into mainstream medicine provides a holistic approach to promote cardiac health for patients. Integrated medicine is surely an attractive proposition within our healthcare system, and complementary and mainstream medicine should be offered alongside each other by adequately trained and well-regulated practitioners. This will guarantee a high standard of holistic care and desirable outcomes in cardiac care.
Because of the lack of scientific evidence into the effectiveness of complementary therapies in the treatment of cardiovascular disorders, more rigorously and carefully designed studies should be conducted in order to support evidence for the effectiveness of these therapies. Health professionals should develop a basic knowledge of complementary therapies to enable them to educate the patients and evaluate the therapeutic effects more efficiently. Today many healthcare providers wish to give holistic care and meet the broader needs of their clients. Complementary therapies can offer clients a broader choice of treatment options and valuable resources in addition to conventional medicine.