

Integrative Medicine: Approach and Scope - A Perspective

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Abstract: *Complementary and alternative medicines are popular in many countries. This perspective highlights the importance of research in complementary and alternative medicine and discusses their possible role in integrative medicine.*

Keywords: Complementary and alternative medicine, Conventional medicine, Integrative medicine.

1. Introduction

From the Stone Age to the modern era the art of treating the sick has undergone an evolutionary process and according to the situations the societies developed their approach to manage the ailments.

Day by day increased influx of knowledge through media, internet and research literature about the toxic effects of modern medicines is creating sense of constant fear in general public. In addition over prescription to treat a case is also a constant threat. According to a survey among 1829 adult participants who had been prescribed antidepressants in the last five years developed twenty adverse effects and eight out of twenty were reported by half of them. Sexual incompetency, emotionally numb feeling, suicidal tendency, feeling of not like myself, caring less about others, reduction in positive approach and withdrawal symptoms were reported by them. The young age individuals were more involved and it was not related to the level of depression at the start of treatment [1].

Anxiolytics can cause a wide range of adverse effects. Beside other systems its main action is on the central nervous system affecting higher cerebral functions and over sedation in very young and very old individuals. Recently the drug dependence of benzodiazepines has been realized a big problem than previously reported [2].

Among antimetabolites, Methotrexate is commonly indicated in conditions like severe psoriasis or rheumatoid arthritis that shows no response to other treatments. It suppresses the immune system in individuals to give relief in their symptoms. It causes hepatotoxicity, myelosuppression, pulmonary fibrosis, repeated infections and severe skin reactions that could be fatal. On other side morphine and other narcotic analgesics has been prescribed with great care due to their depressing effects on respiratory and cardiac centers cause minimal relief of cancer pain documented in a number of clinical settings, including general surgical and medical wards [3], emergency units [4] and oncology wards [5]. Even in outpatient clinics for oncology cases, the pain management is reported critically low [6], [7]. Over prescription is also a constant threat which may lead to serious health concerns due to drug-drug interactions. Major

body and mind related issues arise when a drug is in use for a long time. Drug dependence and withdrawal symptoms are also reported in most cases. In such conditions the patient and their relatives seek advice from a CAM therapist. Low economic group are more prone to switch over to alternative therapies to lessen their treatment cost.

National Centre of Complementary and Alternative Medicine defines the Complementary and Alternative Medicine as, "A group of diverse medical and health care systems, practices and products that are not generally considered part of conventional medicine [8]. The complementary medicines is used along with the conventional medicine but are not considered to be standard treatment whereas the alternative medicine is used instead of conventional medicine [9].

According to a review of surveys conducted in United Kingdom on average, the prevalence of use of Complementary and Alternative Medicine in one year was found 41.1% and its average use in lifetime was found 51.8% [10]. National Centre for complementary and alternative medicine divides the CAM in to four domains: biologically based practices, Energy medicine, mind-body medicine and manipulative and body based practices. It is somehow similar to the allopathic practice which includes management of cases with drugs, surgical procedures, physiotherapy and other rehabilitation services. Some commonly used healing systems under the umbrella of CAM are naturopathy, Homoeopathy, Ayurvedic medicine and Chinese medicine [11].

Biologically based practices include herbs and dietary supplements. Energy medicine includes Reiki, Bioelectromagnetic field therapies, Transcutaneous electrical nerve stimulation (TENS), magnet therapy, light therapy, bioresonance. Mind body medicine includes on top prayers (43% practiced in US population according to the statistics gathered from the NHIS surveys in 2002, 2007), meditation and yoga. Manipulative and body based practices include Chiropractic, Osteopathic manipulation and massage therapy.

Quantity of medicinal substance in CAM is remarkably reduced as compared to the high concentration of drugs used in conventional medicines. In Homoeopathic medicines very

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little traces of active substance can be detected from them. It is based on four basic principles. The principle of similar, proving, minimal dose and high dilutions. The process of production of homoeopathic remedies is achieved by serial dilutions with vigorous shaking. Homoeopathic dilution 12c exceeds Avogadro's number (6.022x10²³). Dilution 12c and above doesn't contain even a single molecule of the original substance.

Hahnemann describes two types of dilutions. The first is 1:10 marked with a Latin Numeral X. In some cases, letter D (for decimal) is used. Another well-known dilution is 1:100 marked with a Latin numeral C. The most frequently used dilutions in clinical practice are 6C, 12C, 30C, and 200C. According to Hahnemann, higher the dilution, the quicker and deeper the action of the remedy is.

Table 1

Hahnemannian Dilutions				
Centesimal		Decimal		
Potency	Dilution	Succussions	Potency	Dilution
1C	10 ⁻²	10 times	1x	10 ⁻¹
2C	10 ⁻⁴	20 times	2x	10 ⁻²
3C	10 ⁻⁶	30 times	3x	10 ⁻³
6C	10 ⁻¹²	60 times	6x	10 ⁻⁶
12C	10 ⁻²⁴	120 times	12x	10 ⁻¹²
30C	10 ⁻⁶⁰	300 times	30x	10 ⁻³⁰
200C	10 ⁻⁴⁰⁰	2000 times	200x	10 ⁻²⁰⁰

The concentration of medicinal substances present in CAM with their relative risk is shown in table 2.

Table 2

CAM	Concentration of chemical Mode of treatment	Frequency of risk
Acupuncture	Plain needles inserted at acupuncture points	Rare
Aroma therapy	Aromatic essential oils are used for inhalation	NDA*
Bioresonance	Application of electrodes connected to Bicom machine. EMG waves are transferred through it.	NDA*
Homoeopathy	Negligible traces of active substances present	NDA*
Herbal medicine	Active principle in less concentration	NDA*
Breathing technique	None	NDA*
Relaxation technique	None	NDA*
Cupping	None	Rare

NDA*=No data available

According to the CAM practitioners in comparison to the very low amount of chemical compounds taken by the patient and their relative low frequency of risk, the conventional medicines have a very exhaustive list of side/toxic effects. Their relative frequency of risk is too

high. In addition, allergy to medicines, Idiosyncrasy and iatrogenic issues are a constant fear for the patients.

The Energy medicine includes Bioresonance therapy which is being in use for multiple bodily problems. According to the Bioresonance therapists, it utilizes body's frequencies in order to achieve health and it also identifies the electromagnetic vibrations of stressors like allergens and toxin and their effects on human cells. The altered electromagnetic vibrations are detected and by the therapy which is programmed to return the healthy electromagnetic vibrations back to the cell, thus restoring health. A number of disorders and ailments like addiction (smoking, drugs etc.) [12], Depression and Anxiety, Trigeminal Neuralgia [13], Asthma, Over Trained Athlete Syndrome [14] and Lymphedema [15] have been claimed treated by the Bioresonance therapist.

Mind-Body therapies include prayer, meditation, deep breathing exercises, bio resonance, cognitive-behavioral therapies, taichi, yoga and shiatsu [17]. In comparison to biologically-based therapies, the mind-body therapies are relatively safe [16].

2. Discussion

According to World Health Organization, Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity [18]. Integrative medicine in a broad sense it focuses on health and healing rather than disease and treatment. It treats minds and spirits as well as bodies and includes all into diagnosis and treatment. It also involves paying attention to lifestyle factors such as diet, exercise, quality of sleep, and the nature of interpersonal relationships [19]. Due to huge diversity of the different modes of treatment enlisted under compulsory and alternative therapy it is very difficult to have a comparative study of CAM with conventional medicine [20]. In literature review CAM studies have small sample size, deficits in methodology, high incidence of bias, lack of scientific and technical terms and lack of technical data in support of the claims. In order to validate the data, the double blind studies, sham procedures and use of animal models should be attempted. Prospective studies can be carried out to observe the lasting benefits of CAM therapies. About acupuncture some concerns arise about its benefits that its effects seem to be psychological due to lack of adequate control. Its effects are no more than placebo effect [21].

There seems to be a trend in general public that there is no harm using complimentary medicine. Garlic is used to lower cholesterol levels. Two case reports suggest a possible increase in the risk of bleeding with garlic use [22], [23]. Ginkgo biloba is likely to be effective in dementia, a small benefit of approximately 3% in Alzheimer's Disease, Assessment Scale-Cognitive subtest [24]. A significant concern regarding the use of ginkgo is spontaneous bleeding [25]. Ginseng is primarily used to boost energy and physical or cognitive performance [26]. A systematic review identified 16 randomized, placebo-controlled trials of ginseng for physical performance, psychomotor performance, cognitive function, immunomodulation,

diabetes mellitus, not found evidence for efficacy for any indication[27]. Ginseng is believed to be safe but there are some case reports of excessive arousal and hyperactivity found in some cases [27].

St. John's wort is likely effective for the treatment of mild-to-moderate depression [28], [29]. Two recent studies found it to be ineffective for patients with severe depression [30], [31]. Kava is traditionally used as a sedative and relaxant. Clinical studies suggest a small benefit for the treatment of anxiety [32]. Use of this herb has been limited by many reported cases of severe hepatotoxicity [33]. On the other hand, the beneficial effects of the complementary and alternative medicine are mentioned in the literature. In a study lymphedema was given treatment by means of electro medical device based on Bioresonance and vacuum technology [34]. CAM therapies in general may provide a useful adjunct in the management of chronic pain [35]. The conditions for which CAM is most frequently in use according to 2007 NHI Survey include neck pain, back pain, joint pain, arthritis, anxiety states while Frass et al report back and neck problem, depression, sleeping disorders, severe headache, migraine and gastrointestinal disorders are the top ailments in which CAM is reported very effective[36]. Systemic reviews of the literature determined in 22 studies, reduction in blood pressure with tai chi were reported [37]. At least in untreatable and chronic problems CAM should be tried along with rehabilitation services to avoid the hazards of toxic doses of conventional medicines like steroids and immunosuppressive agents being in use for a long time which in some cases may lead to drug related health concerns. The complementary medicine like mind – body therapies can be advised with conventional therapies as integrative treatment. This may be far more beneficial than adding placebo. Integrative approach is the holistic nontoxic approach to support sick people in the healing process. Integrative medicine care providing centers should be associated with primary, secondary and tertiary health care centers and should be affiliated with major teaching hospitals. In the centers and teaching hospitals workshops, Seminars and conferences should be conducted to create awareness about integrative medicine in professionals on mass scales.

The CAM therapists have to perform research in their area of study. It would be preferable to do double blind study to lessen the chances of bias. The studies can be supported by the use of modern investigation techniques like blood screenings, histopathology, radiology, CT/MRI scans, ultrasound and angiographies. Prospective studies should be conducted in case of chronic recurring illnesses. Comparative evidence based studies between CAM and controls, CAM with conventional medicines, Integrative and conventional medicines should be designed in untreatable cases.

It is a general belief in the public that CAM are all safe and there is no harm using these medicines. This may be dangerous in cases of cancers. CAM that claims to cure cancer is unproven. Such cases mind-body therapies can be very supportive along with conventional medicines. The psychological benefits to raise the moral in fighting against the disease cannot be under estimated. Integrative approach

by using complementary medicine with conventional medicine in certain cases can be very effective and can give high returns and cost effective [38]. Pain management and behavior change can be among the leading areas of integration models that can have more impact on the health of individuals suffering from the diseases related to the life style.

The holistic approach to treat the sick people is through integrative approach. Funding for research, training, education and healthcare infrastructure is essential as a beginning towards achieving the target to implement integrative medicine in public and private health sectors. Today's demand is to arrange in-depth discussions with the stakeholders to upgrade the settings for implementing the concept of integrative medicine in the society [39]. The best possible practices should be the integral part of integrative medicine.

3. Disclosure

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