

## CAM – Image vs. Reality: a Personal Perspective

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With the enormous growth and popularity of complementary and alternative medicine among the public in most western countries it is clear that medical educators can no longer afford to ignore the subject in their curricula. In the present article I shall try to present my personal feelings as a physician and medical educator for almost half a century and as one who has had a long interest in the phenomenon of CAM. I have also always championed the biopsychosocial approach to medicine, which emphasizes the approach to the whole patient rather than to a collection of organs and/or diseases.

Firstly, there is a real need to define CAM adequately and meaningfully. Ernst, one of the most serious scholars in the field, cites over 150 different modalities that are currently available [1]. While no institution offers all of these therapies, the Miami Center for Alternative Medicine and Longevity offers at least 26 modalities, including bio-oxidative therapy, iridology and Qigong (ancient Chinese art of healing) among others. CAM has also been defined as those therapies that are not taught in western medical schools [2], but clearly this definition is collapsing or has already lost its validity. In my own half century of medical practice my personal experience includes the following partial list of modalities: leeches (probably of real benefit in some clinical conditions, but not for what they were used), cupping, vitamin B12 injections (not approved for the purposes used by physicians), "cures" for cancer called refuin, krebiozen, laetrite (the latter two used in vain by tens of thousands of patients, endorsed by some Nobel prize laureates), chiropractic (for the treatment of diabetes, cancer and asthma), white pigeons on the abdomen for jaundice (a common practice among some ultra-Orthodox Jews in Israel), iridology, the use of the movement of one's necklace to determine the efficacy of prescribed drugs, copper bracelets, magnets on various parts of the body, algae ingestion, holy water, Gerovital (an anti-aging agent meant to guarantee long life to an impressive list of world leaders), and vitamin C for the cure of cancer and heart disease as proposed by a scientist who had won two Nobel prizes. The common factor in this long list, in my experience, has been the singular failure of all these modalities to help and the persistent belief by thousands of patients despite the negative results.

I was also a member of the Israel Ministry of Health's com-

mittee on the study of CAM. As an endocrinologist with a deep interest in the pituitary gland I learned from the reflexologist who testified at the hearings that the entire control of that gland can be found on the big toe. When I asked for the evidence for this statement I was told that he and I simply do not use the same vocabulary and approach.

### Modalities

Should all of these modalities, and the dozens of others, be included in CAM and treated equally? If not, what shall we use as the basis for an acceptable starting definition, since far-ranging claims for therapeutic success are claimed for many of these modalities and new ones seem to spring up daily. A useful approach to this subject would be a comment I once heard from a wise African physician regarding all medicine:

Those "cured" by our efforts include at least four categories:

- those who still have the disease
- those who never had the disease
- those who never took the prescribed medication
- those who would have recovered without our treatment.

If these comments are valid about scientific medicine, how much more are they valid about CAM. Mark Twain, a shrewd observer of human nature, remarked in *A Connecticut Yankee in King Arthur's Court*, "Any mummery will cure, if the patient's faith in it is strong enough."

### Nomenclature

Interestingly enough the original name for CAM was alternative medicine, because many, if not most, of these modalities were proposed as a substitute for orthodox medicine. To quote Hahnemann, the originator of homeopathic medicine, "Diseases are cured most quickly, safely and effectually, by medicines which are capable of producing symptoms SIMILAR to those existing in the patient... this law is universal; all medicines acting CURATIVELY have acted, do act and will forever act in accordance with the principle embodied in this law." Hahnemann and his successors believed and preached that homeopathy could indeed cure all diseases, in what Whorton [3] in amusing characterization referred to as "dilutions of grandeur."

But, of course, as became obvious even to the true believers, not homeopathy, chiropractic, or osteopathy – all of whose practitioners initially claimed to have discovered the answer to

CAM = complementary and alternative medicine

most diseases of mankind – could deliver what was promised. All these systems failed miserably in their competition with conventional medicine which was able to demonstrate tremendous successes by the application of scientific methods. Even today in spite of the flowering of CAM, they have far fewer followers for those conditions in which modern medicine has therapeutic successes – and these successes mount daily.

It is not widely known today that there were once 21 homeopathic medical schools in the United States. Every single one of them either closed completely or converted to allopathic medicine. Today chiropractic, which once claimed to be able to treat cancer, diabetes, asthma and other dread diseases, all said to be caused by subluxation of vertebrae, now carefully confines itself to musculoskeletal disorders. Osteopathic medical schools now have curricula virtually indistinguishable from other medical schools. Thus, “alternative” medicine has essentially disappeared, and even the gullible will no longer accept most of these systems as a replacement for conventional medicine as they were once proposed.

How then did the former “alternative” systems cope with this dismal failure? This was accomplished by a stroke of genius – changing the name to “complementary” medicine. One may express this change by the statement, “If you can’t beat them, join them.” More recently, additional attractive names have been used that are very catchy – “holistic” medicine and “integrative” medicine. These systems no longer attempt to compete with scientific medicine that can do heart transplants, *in vitro* fertilization, and molecular biology, but lay claim to being equal partners with conventional medicine.

This strategy is difficult to fault – who can criticize cooperation and openness to new ideas? The history of homeopathy is fascinating and instructive. In recent years when subjected to the criticism of lack of evidence for the effectiveness of homeopathy, many of their practitioners argued that homeopathy cannot be studied by the usual scientific, double-blind clinical trials because the therapies are individualistically tailored. This view was indeed expressed at the Israel Ministry of Health hearings on the subject. But if one examines the origins of homeopathy, their claim was that they could show by direct comparison with allopathic medicine that their results were significantly better. And indeed at the turn of the 20th century, when conventional medicine was treating patients by means of bloodletting, enemas and induction of vomiting, is it surprising that the death rates with homeopathy were dramatically better than those of allopathy? Unfortunately, most of the CAM systems suffer from a maturation arrest [4] and have continued to base their treatments on theories developed in the 19th century, while orthodox medicine has made giant strides towards the understanding and conquest of disease.

What then shall we call CAM? Clearly it is hard to defend the term “alternative.” But I contend that the term “complementary” is also far from ideal. In conventional medicine we have many therapeutic modalities – pharmacotherapy, radiotherapy, psychotherapy, physiotherapy, and others – all of which are part of our armamentarium. If a given therapy is shown to be

effective it should become an integral part of conventional medicine, fully accepted and integrated, without the need for a special category called “complementary.” For example, artemisia, a Chinese herbal medicine, has been used for centuries to treat a variety of diseases. It now seems that this herb may contain an effective anti-malarial component, and Novartis, one of the world’s largest pharmaceutical companies, is actively developing this product [5]. If successful, this process then essentially removes the substance from the category of CAM into conventional medicine.

The introduction of departments of CAM into many public hospitals and the offering of such services by the health management organizations, in the absence of evidence for their effectiveness, provide an unfortunate educational message to the public. In many cases their introduction was a response to public demand in an era of increasing consumerism and at times for profit-making motives. In most of these same institutions the standard demanded for the introduction of these modalities is far below that insisted by them for the introduction of a new technology or a new conventional drug into their pharmacopeia.

What place is there then for what is termed CAM in the medical school curriculum? Clearly, one dare not ignore CAM and pretend that it does not exist. We must teach about CAM. I would suggest the following principles:

- The most important message to our students is that the practice of medicine is not just the prescription of medications and carrying out of technical and surgical procedures. The basic foundation of medicine is listening to the patient and understanding the patient’s emotional needs. The most powerful tool at the disposal of the physician is his/her personality and empathy. Students would do well to look at some of the photographs in the advertisements for CAM practitioners – always with a huge smile, conveying optimism, caring and hope. The students must also learn about the power of touch, i.e. physical contact – from the light touch of sympathy to the deep massage of the painful area. Physical modalities that can provide symptomatic relief for many medical problems have to find time in the medical curriculum. We must also teach our future physicians not to fear and shy away from those medical problems not fully categorized and defined in Harrison’s Textbook of Medicine, most of which are the result of stress and emotional distress. The new physicians must learn to deal with such problems and not reject these patients and drive them into the hands of various healers who often are more patient and sympathetic. Holistic medicine is part of conventional medicine and not a monopoly of the CAM practitioners.
- We must teach students how to evaluate medical evidence critically, to separate the wheat from the chaff. Clearly the chaff is not the exclusive province of CAM, but it floods the medical and pharmaceutical company literature as well. The recent experiences with estrogen therapy and Vioxx® are examples of the serious problems that can arise with the evaluation of evidence. We must also encourage our students to be open minded about new ideas and therapeutic

suggestions that may indeed come from a non-conventional source and not always from the "authorities." But they must, always, insist on real evidence.

- We must give the students basic information about the commonly used CAM modalities so that they can intelligently advise their patients which may indeed be helpful, which are placebo-like and not harmful, and which may indeed cause serious harm. Most patients are willing and interested to hear their trusted physician's opinion if the physician has developed a caring, open and empathic relationship with them.

I can do no better than to quote the provisos proposed by Sobel [4] to the patient who asks about CAM:

- It is suitable for the individual who is uncomfortable but well or has a self-limited, or non-progressive, illness for which conventional medicine is not likely to be helpful.
- It is acceptable for the patient who is seriously ill, or potentially seriously ill, and already on optimal conventional therapy, if the proposed alternative therapy will not interfere with, or counteract, the conventional therapy.
- The proposed unconventional therapy is not known to be toxic, the source of the material is reasonably trustworthy, and the treatment regimen will not add to the patient's suffering by demanding a complex schedule of administration or a highly restricted diet.
- The obvious charlatan should be denounced unambiguously. The quack who promises to massage away the metastatic lesion should be kept away from the patient if at all possible. The faith healer whose rhetoric convinces a patient to refuse life-saving therapy, e.g., antibiotics for bacterial sepsis, should face legal proceedings.
- Herbal medicines should be subject to regulatory supervision to assure efficacy and safety and quality control. If placebo-controlled studies demonstrate clinically meaningful

effects of a herbal product, pharmacologists should take the evidence seriously. The effective substance should be isolated, identified, fully characterized, and studied clinically; if useful, it should be added to the conventional therapeutic armamentarium.

These directions are the major components of an educational program which I believe is essential for dealing with the CAM issue. Conventional medicine has nothing to fear from CAM; a glance at the history of the past century and the incredible scientific advances on the future medical horizon should remove all doubt about that. Most of the CAM modalities will disappear or decrease in popularity because of their ineffectiveness. Those that will be proven successful will be absorbed into conventional medicine as they deserve to be. We in conventional medicine may also do well to learn from the popularity of CAM; furthermore, a good dose of self-reflection would help us overcome many of our shortcomings.

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