Complementary, Alternative, Integrative, or Unconventional Medicine?

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ABSTRACT

 Shortly before his death in 1995, Kenneth B. Schwartz, a cancer patient at Massachusetts General Hospital (MGH), founded the Kenneth B. Schwartz Center. The Schwartz Center is a non-profit organization dedicated to supporting and advancing compassionate health care delivery, which provides hope to the patient, support to caregivers, and sustenance to the healing process. The center sponsors the Schwartz Center Rounds, a monthly multidisciplinary forum where caregivers reflect on important psychosocial issues faced by patients, their families, and their caregivers, and gain insight and support from fellow staff members.

Interest in complementary and alternative medicine (CAM) has grown exponentially in the past decade, fueled by Internet marketing, dissatisfaction with mainstream medicine, and a desire for patients to be actively involved in their health care. There is a large discordance between physician estimates and reported prevalence of CAM use. Many patients do not disclose their practices mainly because they believe CAM falls outside the rubric of conventional medicine or because physicians do not ask. Concern about drug interactions and adverse effects are compounded by a lack of Food and Drug Administration regulation. Physicians need to be informed about CAM and be attuned to the psychosocial needs of patients. The Oncologist 2001;6:463-473

Mrs. J is an active and health conscious 45-year-old woman with an unremarkable medical history who presented with prolonged abdominal bloating and increasing abdominal girth. Evaluation revealed a large ovarian mass and ascites. The tumor marker CA-125 level was 2,068 U/ml. At surgical exploration she was found to have stage IIc grade 2-3 serous papillary ovarian carcinoma and was optimally cytoreduced. She received three cycles of paclitaxel and carboplatin chemotherapy. At re-evaluation Mrs. J had persisting elevation of CA-125 and was found to have ascites fluid on computerized tomography (CT) scan. She was referred for experimental therapies. Liver-function-test abnormalities were moderately abnormal. She drank very little alcohol and had no history of hepatitis. She felt entirely well and had no symptoms of progressive ovarian cancer. She was actively involved in aerobics and exercise.

In light of her good prognostic factors and the ambiguous clinical picture, laparoscopy was recommended and was unremarkable. Washings and biopsy were negative for cancer confirming pathological complete remission.

After the surgery, more careful questioning revealed that she had been taking megadoses of vitamin A for 3 months prior to the diagnosis. When she was informed that...
her liver function tests were abnormal, she consulted her herbalist who added a collection of Chinese herbs. She also started taking milk thistle and a very long list of supplements. Mrs. J was asked to stop all her extra medications and over the next several months her liver function tests improved and her tumor marker normalized. She is still in remission and doing well.

**Dialogue**

**Presenting Oncologist:** What is always challenging especially with herbal medicines, is telling what the heck it is. I mean patients will bring in a brown capsule, or teabag or a sack of something and say, “What exactly is this? Can you analyze it?” At least for me, that’s been a very big black box.

**Oncologist:** When you buy Tylenol® you better hope when you take the capsule that it is really Tylenol and not Coumadin®. There have been some herbs that were given out that were probably contaminated or replaced by herbs that had similar sounding Chinese names. I think as health care providers, it’s a slippery slope. I do want to be supportive, but you have to realize there are a lot of quality control issues. Usually when we give, for example, Taxotere®, it’s Taxotere in a bottle. If someone says this is ground up root of such and such, it’s very hard to tell if it really is ground up root of such and such.

**Culture Gap**

**Oncologist:** Why do you think there is such a demand for these things? I mean the complementary medicine field doesn’t have the marketing budget of a Proctor and Gamble. A lot of treatments pass by word of mouth, health stores, or the Internet. Is it because we are too pessimistic or too realistic or has medicine failed in some way?

**Oncologist:** I think that’s part of it. But if you look at the diseases that have the most appeal for alternative medications, they are areas where conventional medicine has had least impact. There’s not a big alternative medicine community for appendicitis. There’s a huge alternative medicine community for viral upper respiratory infections. I’m sure there are many people in this room who have taken echinacea. I’ve taken it once. Our treatments for metastatic cancers, despite all the recent advances, are still largely unsuccessful. They make people sick and they’re not curing enough people. Highly active anti-retroviral therapy has made a huge impact on HIV, but there are still people dying from AIDS. I think people want to have control over their lives. In my mind that is the major reason for the appeal of complementary and alternative medicine (CAM).

**Moderator:** David Eisenberg, who directs the Center for Alternative Medicine Research and Education at Beth Israel Deaconess Hospital, recently chaired an extraordinarily provocative discussion and remarked that if you ask practitioners what percentage of their practice uses CAM in cancer, it is about 40%. However, if you then ask patients, it turns out that 80% of them are using some form of CAM, so there is a huge gap between what we perceive our patients to be using compared with what people are actually using. That brings up two important problems: we don’t know that they are using them and “why aren’t they telling us that they are using them?” What would you think was the reason they wouldn’t tell: shame, embarrassment, thinking that we would think that they’re crazy? No, the main reason they won’t tell us is the same reason they don’t share with us their tax returns or talk to us about the roofing of their home. They don’t view this as being a thing that is in our arena of expertise. They go to their doctor, they see their nurse, they might see a social worker, but they view their homeopathy, or massage, or acupuncture as being a completely separate part of the therapeutic intervention.

**Hope or Hype**

**Oncologist:** One of the things I find frustrating is how unrealistic some people are with alternative medication. I take care of a patient who is an attorney. He has metastatic esophageal cancer and is having a tough time with his disease. His daughter, who is a very well-meaning, thoughtful person has contacted me many times with different chemotherapy or phase I’s he wants me to try. He was not eligible because of his performance status and his poor liver function. Then she kept trying a series of alternative medications. Through my e-mails, I explained that we don’t really have any evidence that these work, but if she wanted to try some non-toxic
nutritional supplements maybe it’s not the worst thing in the world. She then came in with him and we sat down together and the wife was also there and she went through the whole list of things saying, “Why isn’t this going to help my father, why isn’t this going to help my father?” It was a very bad interaction and I felt that I was ripping out any chance this guy had of feeling somewhat hopeful about his very difficult and challenging diagnosis.

Oncologist: I think that in many of the alternative therapy systems people spend more time with the patient and that maximizes the placebo effect and the caring relationship between the practitioner and patient.

Oncologist: Patients with newly diagnosed cancer are inundated with well-wishers’ information. I warn patients that they are going to be told, faxed, and e-mailed all these different things they should try because so-and-so knows so-and-so for whom this worked so well. I try to encourage patients to be thoughtful and try to dismiss some of it. They want to be the survivor, they want to beat the odds, and they want to have some control. They want it to work, so they’ll do whatever it takes and nothing will cost too much.

Oncologist: Putting the barrier of Food and Drug Administration (FDA) approval in front of most of these compounds would probably make a large proportion of them disappear. Running the gauntlet of FDA approval may be a positive thing for consumers.

Oncologist: Would that be seen as just another sign of the medical conspiracy to cannibalize every good thing that exists?

Nurse: I think people would just find ways to get it. Just like people who want to smoke marijuana are going to find it. It doesn’t matter if it’s illegal. It’s easy to get things and I think that people who are looking for supplementary therapies are looking for anything that’s going to give them the hope that they are not getting here. So I think they’ll find a way, any way to get it.

Oncologist: Patients come to us when they are sick. We say we’re going to take care of their sickness by giving them a drug that’s going to make them feel awful. We don’t talk to them about health. Patients turn to complementary therapies to help their immune system or make themselves feel better. It’s going to help them have more energy and fight fatigue.

If it does something it’s a drug, in some way or another. They may not want to call it a drug, it may not be marketed like a standard drug, but if it causes some biochemical, physiological, neural, or immunological action, some sort of biochemical process is occurring somewhere.

BOOM BUSINESS

Oncologist: I think that there is tremendous marketing and money involved and that this area is the object of a great deal of commercial interest. I went to the drugstore looking for melatonin and I could not find the appropriate dose capsule without buying five capsules or trying to split a capsule because there were five different sizes. I was really struck by the money-making going on in the vitamin section.

Social Worker: How do you handle it when people sit in a room with you and take testimonies from the Internet and they say, “Listen, this drug is helping people” or say, “You’re part of the medical pharmaceutical complex, and I understand that you’re not going to support this because there is a conspiracy between the pharmaceutical companies and cancer doctors to keep cancer sort of where it is right now?” And then they’ll go through a series of vignettes of people who have a dramatic improvement from shark cartilage or whatever it happens to be. How do you respond to that without alienating the patient and breaking the therapeutic relationship or getting angry?

Oncologist: I will generally say something like, “These types of agents have not been thoroughly tested. I’m open to the fact that some of these agents might help, but I can’t really make a recommendation. If you feel
comfortable about taking these types of therapies, that’s fine. I just want to know when you’re taking these things so that if your blood tests become abnormal I have a better appreciation of what the problem might be.” I actually try to be supportive. I get a little anxious when they start taking expensive herbal remedies and I have no idea about the composition. I get a little paternalistic because some of them get very expensive. I ask them if they wouldn’t rather do massage or meditation or go to church nine times.

**Oncologist:** There is a Chinese herbalist in town who runs a cash only business—truly a cash only business. He won’t even take a check or a credit card. Patients will say, “I’m going to see so and so. It’s $400 cash every time I come for the herbs. Do I need to keep doing that or can I take half as much?” You’re in a sort of tricky position. I mean if you sit there and you just say “That’s absolutely worthless, you shouldn’t pay two cents for it,” you get into the, “Oh, there goes the medical establishment, doubting what they don’t understand,” or “That’s not being very positive.” On the other hand, if you say, “Just tell your husband to be quiet and put a second mortgage on the house,” then I get concerned about how much of this is in the patient’s interest. Maybe there is something to it, but maybe it’s someone preying on desperate people.

**Oncologist:** I was actually very reassured when my very own primary care physician said, “Such and such you’re taking; I think that’s just nonsense, but something else you’re taking, I think that’s okay. I think that will make a difference.” I didn’t have a feeling that he was at war with the alternative practitioners.

**SIDE EFFECTS AND INTERACTIONS**

**Oncologist:** I think it is important to remember that these therapies either do nothing or do something. If it does something it’s a drug, in some way or another. They may not want to call it a drug, it may not be marketed like a standard drug, but if it causes some biochemical, physiological, neural, or immunological action, some sort of biochemical process is occurring somewhere. Even though they may not want to call it a drug, it’s a drug, and if it’s a drug it has the ability to interact with other drugs.

**Oncologist:** I think patients need to be made aware of potential side effects. There are drug interactions that occur with many of these herbal medications. For example, St. John’s wort has been shown to interact with the p450 system, and there have been a few heart transplant patients who actually started rejecting their hearts because of low cyclosporin levels.

**Oncologist:** When someone comes up to me with a list of things, I tend to steer them away from the things you don’t know anything about or have trouble with and you say, “Shark cartilage, which we think might be somewhat safe at low doses, might be okay.”

**EVIDENCE-BASED MEDICINE**

**Oncologist:** One of the things that I’ve found curious is illustrated by hydrazine. Its use is common, and it has been tested in lung cancer. They found no difference in quality of life and no difference in outcome in a 600-person randomized trial. The response of the alternative medical community was just like the response of traditional oncologists when a negative study on conventional therapy comes out. We have a negative study on lung cancer adjuvant chemotherapy and our reaction is, “We didn’t use quite the right doses,” or “If we had just given more modern drugs, we would have had a better outcome.” The alternative practitioners’ reactions were that the hydrazine was not given in the right way. Specifically the belief that Ativan®, used by many patients, counteracted the benefits of hydrazine.

**Oncologist:** One of the difficult things is that I am not certain that the effort to do clinical trials is really going to change many minds. It is hard to change minds with evidence.

**INTEGRATED HOLISTIC CARE AND RESOURCES**

**Social Worker:** Do the families of these patients ever ask you to talk to their complementary or alternative providers?
Oncologist: I’ve never been contacted by a complementary provider.

Nurse: Would you ever call? Would you ever say, “Let me call your herbalist”?

Oncologist: No.

Researcher: I work in HIV research. We have an acupuncturist that comes in and is now doing one clinic for our patients each week. He is also an herbalist. Our physicians were very anxious about patients getting herbs. They’re fine with acupuncture but herbs, no way! Over time, as he has felt more comfortable with the providers, they start to open up a little bit and there is now a dialogue. They are learning about herbs through conversations with him and he appreciates the doctors’ concerns about how these herbs might affect their HIV medication. I think that any dialogue between providers is really helpful.

Oncologist: I think that we, as a cancer center community, should really start talking to the patients about these things so that a dialogue can happen.

Social Worker: The thing that really gets emphasized in complementary or alternative medicine isn’t the, “You have pathology and we’re going to cure it” approach. The emphasis is to strengthen your system. There is a confirmation that the patient has what it takes to deal with this issue. Frankly, taking echinacea, whether it’s a psychological thing or not, I don’t seem to get the upper respiratory infections that everybody around me gets. People are so scared and helpless that they surrender their belief in themselves to a certain extent and it is part of our job to help them maintain that belief in themselves and be part of the team.

DISCUSSION

Prevalence and Costs of Use

Increasing interest in complementary and alternative medicine now has the attention of the mainstream medical community in response to a grassroots consumer movement [1]. CAM encompasses a heterogeneous group of therapies. Therapies range from spiritual healing, dietary modification, and herbs to hypnosis, magnetism, and therapeutic touch [2]. CAM may add to or seek to replace conventional care, and recent commentators have used the phrase “integrative medicine” to foster more open debate. In a sample of HIV/AIDS patients enrolled in a clinical trial at the National Institutes of Health (NIH), 91% had used at least one CAM therapy [3]. A number of reports of the use of CAM among oncology patients cite a prevalence of 1 in 3. As little as 7% to as many as 83% of cancer patients from industrialized nations use CAM [4, 5]. The disparity in prevalence rates between studies of CAM use stems from an inconsistent definition of CAM employed by study subjects or designers. A minority eschews conventional medicine in favor of exclusive CAM therapy, CAM being predominantly used as a complementary health care tool. The number of visits to CAM providers exceeds those to U.S. primary care physicians, and almost half of the total $21.2 billion expended on CAM practitioners was out of pocket [6, 7]. The Internet provides an easy avenue for obtaining CAM information and medications. In one study of those with Internet access, 50% used it to access information on CAM treatments and a little more than 10% of these patients purchased CAM therapies [8]. Helpful websites are listed in Table 1.

Oncology patients resort to CAM therapy more frequently than those with acute or chronic non-malignant diseases [9]. To a degree, choice of therapy is culturally determined [10]. Black women often prefer spiritual healing, Chinese women tend to seek herbal remedies, and Latinos employ dietary therapies and spiritual healing [11]. The prevalence of CAM was very low among Japanese cancer patients [12]. Patients seeking CAM tend to be younger, female, well educated, of higher socioeconomic status, and generally healthier than non-CAM users. Recent literature, however, dispels the notion of an empowered and relatively healthy female as the prototypical CAM consumer.

Evolving Definitions

Initially termed “unconventional medicine” to distinguish it from the medicine practiced in hospitals or taught in
medical schools, a vociferous lobby coined the term “alternative” [2]. In its strictest sense, alternative therapy implies care in lieu of conventional medical care and has the connotation of delaying conventional medical care as well as creating a potential harm either directly (via a pharmacological effect) or indirectly (via delay and false hopes) [13]. The term “complementary-alternative medicine” was introduced, fueled perhaps by hostility from mainstream medicine and by research suggesting that advocates of alternative therapies mainly complement conventional care rather than shun it. The renaming of the Office of Alternative Medicine to the National Center for Complementary and Alternative Medicine underscored this shift in emphasis [14]. The newest term, “integrative,” suggests a thawing in relationship between CAM and conventional medicine. Integrative medicine has gained popularity by emphasizing health and healing rather than disease and treatment [15].

Panacea or Poison?

The top-selling herbs in the U.S., in millions (M), include gingko biloba ($147 M), St. John’s wort ($104 M), echinacea ($72 M), and saw palmetto ($45 M). The top-selling nonherbal dietary supplements included glucosamine/chondroitin sulfate ($288 M), CoQ-10 ($41 M), and shark cartilage ($6 M), and a staggering $4 billion is spent on vitamins (data from Drug Store News, May 2000). This multimillion-dollar industry makes it necessary for doctors to familiarize themselves with the literature on CAM’s potential efficacy and toxicity.

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Are not efficacious. The negative results have been attributed to flaws in RCT research designs. This includes insufficient statistical power, poor controls, treatment variation within and between subjects, and lack of comparisons with other treatments and/or placebo [17]. Many critics cite lack of research skills by CAM practitioners as a limitation to effective investigation [18]. The knowledge base of CAM practitioners reflects a tradition of clinical observation coupled with an empirical approach to treatment [19]. CAM practitioners usually offer their clients a “package of care” to complement a specific treatment [2]. Therefore, in order to maintain external validity, RCT designers would need to favor multifaceted intervention trials over single interventions—a costly and logistically difficult endeavor. With the widespread availability and easy acquisition of CAM therapies, doubts arise about whether true “randomization” without contamination can occur [17]. Established randomized controlled trial designs preclude investigation of hands-on CAM therapies due to failures in achieving blinding [20]. Attempts at “pragmatic” RCT study design have allowed the therapy to be tailored to the patient, thus resolving issues of treatment variability [21]. Caspi et al. introduced the term “dual-blind” to represent a methodology where the subject and an external evaluator, but not the practitioner, are blind to treatment [22]. This alleviates concerns that double-blindedness could not be achieved with CAM. In one study on therapeutic touch (TT) where blinding was achieved, TT practitioners correctly identified which of their hands were closest to the investigator’s hands (based on “energy fields”) 50% of the time [23]. In aggregate, well-designed RCTs investigating CAM require more preparation and pilot studies than their conventional medicine counterparts. However, RCTs are not an obligatory first step for those...
CAM practitioners seeking to gain widespread attention for a novel treatment. The National Cancer Institute (NCI) implemented their Best Case Series as an early evaluation mechanism for alternative cancer therapies proven to be efficacious on at least a few occasions. It applies the principles of evidence-based medicine to a practitioner’s observational data. Compelling evidence could even yield funding from the institute for further study. According to the Director of the NCI’s Office of Complementary and Alternative Medicine, “The Best Case Series is a very crude way to look for kernels of information to see if there is any justification to go after additional data” [24]. Allowing anecdotal evidence instead of scientifically grounded research as a justification for CAM, fuels the accusation of a profit-minded agenda [25].

Efficacy

There are notable positive studies of CAM. In a 990-subject randomized controlled trial, intercessory prayer (remote praying by others) was associated with lower coronary care unit course scores suggesting prayer to be an effective adjunct to standard medical care [26]. A meta-analysis of placebo-controlled trials on homeopathy revealed that the clinical effects of homeopathy were not due solely to a placebo effect [27]. In a systematic review, acupuncture, transcutaneous electrical nerve stimulation, and massage therapy provided measurable pain relief in the cancer or terminally ill patient [20]. A meta-analysis of randomized trials on St. John’s wort (hypericum perforatum) for depression found that hypericum extracts were more effective than placebo for mild to moderate depression [28], and prospective controlled nonrandomized and randomized matched-pair studies nested within a cohort study of 10,226 cancer patients treated with Iscador® (mistletoe extract) and derivatives suggested that survival time was longer in patients treated with Iscador [29]. Lastly, what initially appear to be quack remedies can sometimes rapidly become mainstream: arsenic trioxide for acute promyelocytic leukemia, for example [30, 31].

Toxicity

Enthusiasm for CAM should be tempered by an appreciation of its potential hazards. Optimal dose, schedule, and route of administration of CAM are rarely formally evaluated [18]. Many of the complementary medications, particularly the herbs, contain pharmacologically active substances with anti-inflammatory, vasodilatory, antimicrobial, anticonvulsant, sedative, and antipyretic properties [32]. The theoretical potential for adverse effects and drug-drug interactions therefore exists. Herbalists use unpurified plant extracts composed of varying constituents with inconsistent proportions between extracts. The lack of quality control makes CAM medications vulnerable to contamination, adulteration, or misidentification, and reported incidents of death or illness from CAM use in lieu of conventional medicine or from its acquisition through the Internet and inappropriate self-administration lends currency to the possibility of more widespread toxicity [33, 34].

The Alpha Tocopherol Beta Carotene (ATBC) randomized trial found an increased risk of lung cancer in the group receiving beta carotene [35]. The Chinese herb Aristolochia fangchi was recently found to be associated with urothelial carcinoma in a remarkable 18 of 39 patients [36]. St. John’s wort induces intestinal P-glycoprotein and intestinal and hepatic CYP3A4, to a degree that can decrease activity of drugs such as antiretrovirals, some chemotherapeutic agents, some antibiotics, and opiates [37]. Other reported adverse effects include germander with acute hepatitis, ephedra with fatal cardiovascular events, and comfrey with veno-occlusive disease [38]. Widely publicized adverse effects such as the valvular and thromboembolic complications of the appetite suppressants, fenfluramine and phentermine seem to have made minimal impact in deterring CAM use [39].

Regulation

The Dietary Supplement Health and Education Act of 1994, which limited the role of the Food and Drug Administration (FDA), deregulated the herb and “dietary supplements” industry, catalyzing an economic boom. The act holds herbal medications to a lesser standard compared with prescription drugs. Specifically, animal investigations, clinical trials, and postmarketing surveillance are not required. Removal of an herbal drug from the market necessitates that the FDA provide “convincing evidence” of adverse effects [40]. The myriad of herbal concoctions with inconsistent compositions and inadequate quality control proves to be a regulatory nightmare. Within a 5-year span (1993-1998), around 2,600 adverse events and 100 deaths associated with dietary supplements were reported to the FDA [40]. No central mechanism for mandatory reporting of such adverse effects exists. The resulting under-reporting
further limits the amount of information the FDA can accrue to build a case against a drug. Compiling such a case thus entails significant expenditure of staff time and monetary resources. Pursuing every lead could yield minimal gains. Therefore, the FDA is constrained to be reactive rather than proactive in limiting the sale of potentially toxic drugs [38].

Placebo or Drug?

Proponents of CAM cite their practitioner-patient relationship, clarity of explanations, and the treatment environment as reasons for the high satisfaction that patients report. If these reasons augment the therapeutic outcome of treatment, they then serve as potential contributory factors to a “placebo effect.” A plausible explanation for CAM’s effectiveness lies in the possibility that CAM practitioners are superior to their conventional medicine colleagues at using and maximizing the “placebo effect” perhaps as evidenced by the benefit of homeopathic medicine which dilutes out the active ingredient [19].

Harnessing Hope: Motives for CAM use

CAM appeals to the patient with unmet needs from conventional medical therapy. Cancer patients have advocated CAM use to enhance immune function and to prolong life or cure disease [41]. The medical conditions for which CAM therapies are commonly sought include the ones that are deemed among the most difficult to treat (HIV, infection, chronic pain, and cancer) [42]. Interestingly, one-third of patients in one study employed CAM use for a medical condition besides their primary ailment [6]. Psychosocial distress may motivate some patients to seek remedies for the troubling issues for which conventional medicine has few answers [43-45].

CAM users tend to perceive their conventional physicians as repositories of sound scientific information. On the other hand, their CAM practitioners are credited for incorporating emotional and overall support to their therapeutic armamentarium [41]. This disconnect between patient expectations of their physician and CAM practitioners fuels the demand for CAM. It perhaps partially explains why as many as 72% of patients fail to disclose their CAM use, regarding it as beyond the province of conventional medicine [46]. Physicians perpetuate this notion by failing to inquire about CAM use. In one study of prostate cancer patients, nearly 40% of patients used CAM compared with the patients’ physicians who estimated an overall CAM use of 4% [47]. This discordance between physician assumptions and actual CAM practices underscores the necessity to elicit a more thorough history during the intake process. In one study, a routine history and physical elicited a 5% CAM prevalence rate. Subsequent direct inquiry unmasked an additional 40% of patients employing CAM [41]. Non-directive or routine histories prevent the opportunity for meaningful discussion about CAM use. The prevention, recognition, and treatment of complications begin with explicitly eliciting and documenting a history of herbal medicine use. Of patients who used both conventional therapy and CAM, less than 10% of them had had a CAM referral by their physician. The fragmented delivery of care between conventional and complementary practitioners reinforces the perception that these two fields will remain disparate and uncoordinated [48].

Strong objectors to CAM view the phenomenon of reverting to scientifically untested methods as running counter to medical progress. In a New England Journal of Medicine editorial, Angell and Kassirer state, “There cannot be two kinds of medicine—conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work” [49]. Such remarks have been interpreted as either underscoring the general sentiment that mainstream medicine would have no qualms about incorporating a proven CAM therapy, or as belligerent antagonism. Defenders of evidence-based medicine (EBM) adamantly refute the criticisms voiced by a significant constituency within the CAM field [50]. Medical decisions prior to EBM, they argue, were based on tradition, power, and influence, which adversely affected disadvantaged populations. They intimate that CAM resembles that antiquated and unjust system.

Of the myriad reasons cancer patients seek CAM, a sense of helplessness, incomplete trust in physician, a changed outlook since cancer diagnosis, and a deteriorating functional quality of life are among the most generally voiced [45, 51]. Patients battling serious ailments valued CAM for its medicinal potential. Enhancing quality of life in the face of failing health is an important source of hope. Skeptics of CAM question the professed claims of an elixir by many in the field as being misleading. Moreover, repeated use of ineffective CAM therapies compounds denial and prevents positive adjustment [19].
Many patients turn to CAM out of frustration with the limitations of orthodox biomedical treatments. When asked by a patient, “What can I do to help my blood count or improve fatigue?” a common response is either, “Whatever you want,” or, “Nothing.” The more holistic and patient-centered approaches that CAM offers enhance a sense of control by minimizing sentiments of passivity [52]. The common rhetoric depicts an overwhelmed, helpless, and hopeless patient seeking CAM to regain control. Psychometric studies performed on women enrolled in cancer support groups or CAM therapies reveal that they score high on problem-solving coping but score low on escape/avoidance coping. In addition, they perceive a lower sense of personal control [53]. Conversely, studies have demonstrated that some CAM users have greater trust in their body’s healing potential, and they are already equipped with a more internalized locus of control than their non-CAM seeking counterparts [54]. Therefore, the extent to which CAM is sought may be influenced by the patient’s motivation and perceived severity of her illness [55]. An important underlying motive for CAM use is fear of death. In the oncology patient, the specter of loneliness, unknown pain, and feelings of emptiness enhance such fear and CAM aids in attenuating patients’ trepidations [56]. Recent evidence reveals that patients of CAM practitioners are more likely to perceive themselves as risk-takers than those self-administering CAM treatments. Such individuals estimate their risk-taking to be comparable to the general population [57].

The desire to maintain control is shaped by one’s socioeconomic and cultural context. Individuals with high social status and professionals tend to operate with a greater internal locus of control. These findings are congruent with the current surveys depicting the prototypical CAM seeker as empowered, educated, and wealthy. Moreover, they underscore the obvious but sometimes overlooked fact that these decisions do not occur in a vacuum. One’s social circle influences the search and selection of CAM therapies. The dynamic between patient and social group depends on the levels of stress and the type of coping skills employed by the patient. High stress and poor coping skills elicit rejection from the social group that is amplified by a sense of vulnerability and helplessness. A plausible scenario would depict a cancer patient as an avid CAM seeker aiming to feign control. As a consequence, the social group is appeased and support maintained.

**CONCLUSION**

“Magic will always be more enthralling than the mundane, hope is better than reality, and there is a deep need in all human beings, particularly those afflicted with terrible disease, to seek miracles.”

—Faith Fitzgerald [58].

As cancer incidence rates and survival time both increase, use of CAM, a consumer driven mode of care, will very likely increase. It has, until recently, been an “invisible mainstream” within the health care delivery system. Patients’ unmet desires to be involved in their medical care and have their fears heard and understood are satisfied by CAM therapies and its practitioners. Does conventional medicine, in our patients’ eyes, reflect man’s limitations and hence his mortality? The impetus to seek solace in other modalities perhaps arises from the taxing and grueling side effects of cancer treatments and a disease-based emphasis by conventional practitioners. It behooves the medical profession to adopt a holistic approach towards every patient. Such an admonishment is not new. Psychosocial concerns, in particular feelings of helplessness and passivity, may drive the use of CAM. This necessitates that conventional medicine provide an empowering and patient-centered approach by emphasizing informed and shared decision-making. We can no longer dismiss the popularity of CAM or be defensive about territorial wars. Of greater concern is that the medical profession’s response to the rise of CAM use may reflect a fundamental disconnect between what patients expect of their conventional practitioners and what practitioners believe they are providing. Conventional medicine is valued as a repository of medical knowledge and scientific thought, with no appreciation for holistic healing. The use and popularity of CAM by cancer patients demand a broader dialogue between the orthodox and CAM communities that should offer the possibility for better care of patients with cancer.
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