Complementary and Alternative Medicine: Not Many Compliments but Lots of Alternatives

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THERE HAS BEEN GROWING INTEREST in the use of complementary and alternative medicine (CAM) for the treatment of a variety of medical conditions, especially psychiatric disorders. Why should “good, evidence-based practitioners” worry about such interventions? After all, they do not actually involve “our patients” who are working closely with us and are so attentive to our wisdom and reassurance. Well, that conclusion may be unwarranted, and failure to consider CAM in the course of patient care may place patients in jeopardy because “good, evidence-based practitioners” may actually miss two important bits of evidence. First, some CAM treatments may actually be helpful for some patients so these treatments may represent missed therapeutic opportunities for our patients. Second, whether we like it or not, there is plenty of evidence to suggest that many patients use CAM treatments that, if undetected, may impair treatment responses or, even worse, lead to serious adverse events.

There is a long history of specialized, nontraditional treatments being used for a variety of medical conditions, especially for child and adolescent psychiatric disorders. But, why focus on child psychiatric disorders? There are a number of suggestions as to why this is the case but four seem to be the most salient. First, there is a general lack of consensus as to the specific pathophysiology that can be the target of treatment for most psychiatric disorders. Second, relative to the rest of clinical medicine, there is purportedly a dearth of safe, effective medications; never mind the evidence suggesting that the psychiatric medication responses are comparable to those in other areas of medicine (Leucht et al. 2012). Third, there is concern about possible, undetected, medication side effects that will have an adverse impact on the developing brains or bodies of our youth. And fourth, many are fearful that using even well-studied medications is not good for children and adolescents and certainly not as good as using more “natural” approaches to treatment, even if those “natural” treatments have not been studied at all. However reasonable or unreasonable one finds these concerns, clinicians must face the reality that these concerns open the door for both the responsible and not so responsible use of CAM treatments. And this door is often open quite wide as many of these treatments are unregulated and unsupervised and sometimes, though certainly not always, offered by various “therapists” who weigh on the anxiety and guilt of deeply concerned parents. So, where do fact and fallacy separate, and what is a responsible clinician to do when faced with CAM treatments?

In general, “complementary and alternative” refers to various types of more “traditional,” “natural,” and/or noninvasive forms

of healing. In some instances, CAM seems to focus on treatments that some “clinicians” have determined to have face validity and then maintain use, with only anecdotal evidence. Many CAM treatments have been around for a long time—decades to millennia—while others are new creations; whether new or old, most lack a solid, empirical base. To counter this, many CAM proponents argue that this lack of an evidence base is due to the lack of funding for proper clinical trials—an argument that can also be made for many, more mainstream or even “off-label” treatments. Of course, there are also some more-radical CAM proponents who argue that scientists (and their corporate sponsors) are so biased that they will not allow fair trials to be performed. In the presence of a limited or absent evidence base for CAM treatments, there are still strong CAM advocates who insist that CAM treatments are natural and safe so why not use them alongside (complementary) traditional treatments or even to replace (alternative) traditional treatments.

A recent study by Gabbay and her colleagues (Gabbay et al. 2012), demonstrates all too well that there need be nothing alternative about the use of a natural compound in the treatment of a known disorder. In a study on the use of omega-3 fatty acids (O3Fas) (a component of often-suggested fish oils) for children and adolescents with Tourette syndrome (TS), Dr. Gabbay and her colleagues were able to conduct a proper, randomized, double-blind, placebo-controlled trial. The logic behind the use of O3Fas was clear and with face validity including connections to the previously studied ability of O3Fas to affect central monoamine and immunomodulatory mechanisms, both of which have been implicated in the etiology of TS. While this small, initial trial failed to support the primary hypothesis related to reducing tics, there are still important lessons to be learned from this study. First of all, with careful design and planning, a CAM study can be successfully executed. Second, even though there was not a statistically significant reduction in tics in the treated patients, some children did have favorable outcomes. Equally importantly, there are now favorable safety data on the use of O3Fas in children and adolescents. Is this the end of the story? Hardly. Replication and careful assessment of other possible outcomes will be essential, but this is surely a demonstration that a CAM treatment can survive the rigors of standard empirical investigation.

It seems quite clear that there are a wide variety of other treatments that are considered to be in the realm of CAM. And, they appear to be in very wide use. Indeed, some have estimated that as many as 75% of American adults use CAM treatments at some point with about 60% using such treatments in the past 12 months

and about 50% in conjunction with conventional medical treatments (Barnes et al. 2004). While similar numbers are not readily available for children, the 2007 National Health Interview Survey found that about 12% of youth were receiving CAM treatments (Adams et al. 2008). So, the situation is quite real and demands the careful attention of all practitioners, both in terms of being informed but also proactively engaging patients and families in discussions about CAM treatments.

While CAM has had a bit of a shady past, there have been more recent attempts to bring order and rigor to the study of CAM. A Congressional mandate in 2000 established the National Center for Complementary and Alternative Medicine as one of the NIH's 27 institutes and centers (see the NCCAM website: nccam.nih.gov). With an annual budget of about \$120 million and a staff of 65, NCCAM is actively pursuing its mission "to define, through rigorous scientific investigation, the usefulness and safety of complementary and alternative medicine interventions and their roles in improving health and health care." NCCAM proposes to address this mission through three long-range goals:

1. Advance the science and practice of symptom management.
2. Develop effective, practical, personalized strategies for promoting health and well-being.
3. Enable better evidence-based decision making regarding CAM use and its integration into health care and health promotion.

Five objectives serve these goals:

1. Advance research on mind and body interventions, practices, and disciplines.
2. Advance research on CAM natural products.
3. Increase understanding of "real world" patterns and outcomes of CAM use and its integration into health care and health promotion.
4. Improve the capacity of the field to carry out rigorous research.
5. Develop and disseminate objective, evidence-based information on CAM interventions.

With their relatively modest budget and this broad mandate, it is not terribly surprising the NCCAM has yet to achieve most of its goals and objectives. This is unfortunate as it leaves practitioners with few tools and limited data with which to manage the onslaught of claims flying around the internet—the same challenge faces families vulnerable to unwarranted promises and unknown risks.

By NCCAM's own reckoning, CAM treatments represent a broad spectrum from "A to Z: acupuncture to zinc." Among the hundreds of CAM topics covered on the NCCAM website are amino acids, black tea, biofeedback, chelation, dandelion, ear candling, folate, garlic, herbs, iron, kava, l-tryptophan, mindfulness-based stress reduction, melatonin, naturopathy, omega-3 fatty acids, probiotics, riboflavin, s-adenyl-l-methionine, thiamine, vaccines, vitamins, yoga and yohimbine. Of course, among the offerings in listing are such favorites as balneotherapy, fenugreek, horsetail, peppermint, qi gong, and tai chi. Many clinicians may snicker when they see this list, but they are well advised to take these matters seriously as many patients and a growing number of holistic practitioners are considering and applying these treatments and many more. This could not have been made more clear than at a symposium on CAM at the 2012 Annual Meeting of the American Academy of Child and Adolescent Psychiatry. Child psychiatrists and pediatricians offered thoughtful presentations to a large and interested audience who listened to presentation after presentation

bemoan the fact that there were few methodologically sound studies with adequate sample sizes, controls, etc., from which to draw conclusions about treatment. Despite this lack of evidence, each suggested that families are not willing to wait for proper studies and are demanding CAM treatments, now. Further, they opined that since most were not harmful and some had real potential for good, responsible clinicians can and should consider administering these treatments. Thus, many practitioners are having to balance the incredible lack of empirical data with anecdotes and the competing demands for CAM treatments from patients and families.

For the discerning clinician, the NCCAM website is a useful source of direction for evidence-based information to the extent that such information is available; NCCAM is cautious in most areas. For example, of particular relevance to child and adolescent psychiatry is the section on the use of dietary supplements. In this area, NCCAM advises parents and practitioners as follows:

1. Many complementary health products and practices, including herbs and other dietary supplements are not tested for safety or effectiveness in children and children may react differently than adults do to these approaches.
2. Although many dietary supplements come from natural sources, **"natural" does not necessarily mean "safe."** [their emphasis] Dietary supplements can have side effects, and these may be different in children than in adults.
3. Federal regulations for dietary supplements are less strict than those for prescription and over-the-counter drugs. Some dietary supplements may be of poor quality or contain contaminants, including drugs, chemicals, or metals.
4. NCCAM urges parents to follow the CDC's vaccination recommendations in order to safeguard their children against vaccine-preventable diseases. Vaccines prevent infectious diseases in people who receive them and protect those who come in contact with unvaccinated, infected individuals. Vaccinating children against diseases helps protect our community's and our children's health.

Based on this and other examples, using the NCCAM website can provide a helpful starting point for patients and practitioners who want discuss the use of CAM. But, is it enough?

Perhaps the time has come to end the notion of CAM as a separate entity. This will require tough decisions from many parties. "Modern" practitioners must begin to reckon with not only demands of patients but also growing evidence that natural and traditional treatments can and do offer valuable opportunities for interventions for their patients. At the same time, advocates for CAM treatments must insist that they be scrutinized for safety and efficacy, just as required for "standard" treatments. If there are empirical data to support the efficacy of any treatment, then it is not "alternative." And, if it works well in conjunction with another established treatment, it is adjunctive or an adjuvant, not "complementary." Unfortunately, this process is unfolding far too slowly to protect our patients. There is little room to compliment those who choose to eschew or ignore empirically derived data and to charge ahead because patients cannot wait—we have a long history of mistakes when we do that. But, there are many untested alternatives that have a long tradition. Especially in this time of limited new drug discovery, it behooves us to consider some of these so-called CAM treatments for proper study and use. In all cases, practitioners must query and work with patients and families about CAM treatments as they are a part of daily medical practice, whether we like it or not.

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