Cancer, Unproven Therapies, and Magic

Review Article [1] | September 01, 2000
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Commonly used by cancer patients, unproven therapies are treatments that the practitioner claims can alter the disease process although there is no proof to support the claim. The reasons for the popularity of unproven

In this issue of Oncology, Dr. Wein presents a thoughtful discussion on the use of unproven therapies by cancer patients. He attempts to explain the rationale and motives behind such use, and the challenges faced by oncologists when encountering patients who embrace them. This commentary further highlights important issues, and provides alternative viewpoints.

Although no set of terms is ideal, we feel that it is important to use a defined vocabulary when discussing unconventional medical therapies (UMT). The term unconventional medical therapy includes [alternative] and [complementary] therapies, which have important nuances in definition. The same modality might be considered alternative if used in lieu of a conventional medical therapy, yet complementary if used as a supplement to a conventional therapy.

Unconventional medical therapies typically include modalities that are not traditionally part of allopathic medicine—eg, herbal or other supplements, meditation, biofeedback, acupuncture, and homeopathic tinctures—but may include nostrums and other hoaxes. A conventional therapy used out of its accepted context, on the other hand, might become a UMT—for example, the use of penicillin for Parkinson’s disease.

Are UMTs Becoming the Norm?
In recent years, unconventional medical therapies have infiltrated the mainstream of medical practice. The Dietary Supplement and Health Education Act of 1994 prevents the US Food and Drug Administration (FDA) from regulating nutritional supplements. Although specific therapeutic claims are not permissible, it is common for media advertisements to promote a supplement, typically as [natural] in the context of promoting the general health or well-being of a specific organ. Popular slogans, such as [increase your libido with this safe, natural, scientifically proven supplement] or [This herbal preparation is clinically proven to benefit [insert body part] health], can be heard on many radio stations.

Use of UMTs in the general population skyrocketed in the 1990s, and it is estimated that 42% of the general US population use UMTs to promote well-being.[1] This figure is likely higher for those diagnosed with cancer. Dr. Wein emphasizes that physicians must ask patients about the use of UMTs because of the magnitude of their use and the potential for direct harm or interaction with conventional therapies.

Questionnaire studies estimate that 9% to 64% of cancer patients use UMTs; these surveys suggest that patients are reluctant to discuss UMT use with physicians.[2-7] A study at the Hospital of the University of Pennsylvania revealed that the disclosure of UMT use by cancer patients increased from 7% with standard history-taking to 43% with the addition of directed questions.[8]

Hazards/Benefits of UMTs
While UMTs are frequently promoted as [natural] and, therefore, safer than conventional therapies, there are potential dangers. It must be remembered that medications such as atropine, digoxin, and paclitaxel (Taxol), are natural plant derivatives. Various UMTs have been shown to cause liver or renal impairment, electrolyte imbalances, interactions with prescription medications, or carcinogenesis.[9,10] Shark cartilage may cause an elevation in transaminases, possibly leading to hepatitis.[11] In addition to this warning, patients should be cautioned not to use shark cartilage enemas if they are at risk for neutropenia.

Although the deleterious effects of particular UMTs are becoming evident, it is also clear that others may be salutary, especially when used as complements to conventional therapies. For example, acupuncture has been shown to reduce chemotherapy-induced nausea and emesis, pain perception, and possibly even radiation-induced xerostomia.[12-14] Biofeedback with relaxation training can decrease chemotherapy-induced nausea.[15] Lycopene may lower prostate-specific antigen levels,
with possible activity against prostate cancer.[16] Nevertheless, selected treatments will need validation by well-designed, prospective trials (some of which are already being sponsored by the National Cancer Institute) before they can be recommended in specific circumstances.

**Patient Superstitions Sustain UMT Use**

Dr. Wein discusses the emotional component associated with the diagnosis of cancer, as well as factors motivating the use of UMTs. Under ordinary circumstances, people do not actively think of dying and the potential for associated pain and suffering, because there is an operational level of denial. However, cancer causes these walls to crumble, however. When cancer is diagnosed, the patient often engages in active denial (telling oneself that it just cannot be so) and the use of magical thinking (an unrealistic and artificial mechanism that arises in an attempt to influence outcomes).

In everyday life, many of us casually resort to superstition—for example, knocking on wood to allay the appearance of evil forces. Similarly, the use of dietary supplements often reflects the quest for magical results to promote general well-being and ward off the evil eye. This could be considered a form of prophylactic magical thinking.

After the diagnosis of cancer, the patient is presented with traditional therapeutic options and a discussion about the statistical probability of success, but no assurance of outcome. Patients who choose to add complementary therapies to conventional measures are hoping to influence the odds, possibly asking themselves: What have I got to lose? I am desperate, afraid, and alone. There may be a resort to a greater fantasy—one considered a form of therapeutic magical thinking—which serves as a means of escape from the restrictions imposed by external reality.

Denial and magical thinking may become more prominent, but their use is not delusional until reality testing is lost. Those who eschew traditional medical therapies in favor of the unproven alternatives, on the other hand, take an even more defiant approach and seize the power of decision and control. It is important that these patients understand the relevant contingencies.

Only recently have certain medical schools and residency training programs begun to include unconventional medical therapies in their curricula. Most practicing oncologists have no formal training or functional knowledge of UMTs, but patients go to their physicians armed with reams of Internet-derived data regarding both conventional and unconventional therapies. Some physicians may feel threatened by their own lack of familiarity, or by the patient’s assumption of greater control.

Ultimately, the results of prospective trials will help physicians accept or dismiss specific UMTs. However, the lack of these data will not deter patients from their use. It is no longer appropriate for physicians to dismiss all UMTs as ludicrous and unfounded. We must be able to converse intelligently about them with patients, and we cannot castigate patients for their use, provided they are safe. However, we must have enough knowledge of UMTs to protect patients from medical dangers and hoaxes.

**References:**


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