

OPINION

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Is there a role for nutritional supplements in cancer care? Challenges and solutions



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“The failure of physicians to communicate effectively with patients about nutritional supplements may result in the loss of trust within the therapeutic relationship, and in the selection by patients of harmful, useless, or ineffective and costly nonconventional therapies when effective therapies may exist.”

Nearly half of cancer patients in the USA report using at least one complementary or alternative treatment modality after their initial diagnosis and as many as 91% during chemotherapy and radiation treatments [1].

Nutritional supplements (NS) such as vitamins, minerals, botanicals and certain other substances are one of the easiest and most accessible modes of complementary therapies that cancer patients use. Previous reports estimate that these products are used by 20–90% of patients affected by cancer [2,3]. In more recent reports of women with breast cancer undergoing treatment and up to 9 years postdiagnosis, NS use ranged from 67 to 87% [4,5].

Scientific support for cancer prevention

Unfortunately, the current knowledge on the effectiveness of these nutritional supplements in cancer care is limited, and only a few benefits have been proven in clinical trials. The 2007 World Cancer Research Fund/American Institute for

Cancer Research report suggests that nutritional supplements are unlikely to improve prognosis or overall survival after the diagnosis of cancer based on the evidence from both observational studies and clinical trials [6].

A more recent report from the US Preventive Services Task Force concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of multivitamins and single or paired nutrient supplements, except β -carotene, and vitamin E for which the findings are negative, for the prevention of cancer [7].

Another recent systematic review suggests that there are no data to support the widespread use of dietary supplements in westernized populations (with the exceptions of vitamin D and omega-3 fatty acids) [8].

With this consensus of experts of limited evidence to suggest NS to patients affected by cancer, one might raise the question why NS are still quite popular among patients?

KEYWORDS

- alternative medicine • cancer care • complementary medicine • curcumin • dietary supplements • empathy • fish oil • green tea integrative medicine • nutritional supplements • patient-centered care • patient–doctor communication • unmet needs

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The patient perspective

One needs to understand that patients are not only looking at reducing risk of cancer but rather looking for possibilities that can reduce the toxicity of oncological treatments such as chemotherapy and radiation. A recent report mentions a number of high-quality studies that suggest clinical benefit to integrating NS into conventional cancer care especially in conditions such as neuropathy, mucositis and diarrhea [1]. In the past 5 years, additional studies have accumulated and suggest that NS use might have clinical benefit with these patients. Examples include integration of curcumin as a chemosensitizer and radiosensitizer in treating tumors, and at the same time chemoprotector and radioprotector for normal organs [9], fish oil improves chemotherapy clinical response in patients with lung cancer [10], milk thistle reduces chemotherapy-related hepatotoxicity in children with acute lymphoblastic leukemia [11] and others [4,5].

As a result, one can understand why patients may take NS to reduce side effects and organ toxicity, and to protect and stimulate immunity. While scientific- and evidence-based thinking is fundamental to contemporary medical practice, failure to recognize that patients often do not reason in this way interferes with the physician's ability to address the unspoken needs of patients affected by cancer.

In addition, patients tend to use NS in anticipation of psychological support or because they want to do everything possible to feel hopeful, get more control in decision-making, enhance the immune system, use less toxic treatments or reduce side effects and possible toxicity of conventional treatments. In fact, most patients choose to use NS to improve their quality of life rather than seeking a cure for their disease [12].

Patient–doctor communication

With the current perception among patients that this use is not acceptable to their physicians or that their physicians are indifferent or negative toward this use, they often do not report the use of NS to their provider [13]. As a result, there is a gap in communication between the providers and their patients [14].

The failure of physicians to communicate effectively with patients about NS may result in the loss of trust within the therapeutic relationship, and in the selection by patients of harmful, useless, or ineffective and costly nonconventional therapies when effective therapies may exist. Poor

communication may also lead to a diminishment of patient autonomy and self-efficacy, and thereby diminish the self-healing response [4].

Communication between clinicians and patients is an interactive process, not a concise, focused dialog of questions and answers. The patient–clinician dialog involves not just ‘words’; it also involves the ‘voice.’ The ways in which one expresses himself or herself – using a soft or loud voice, slow or fast speech and verbal and nonverbal cues – all are connected and are part of communication between two people. Communication can relate to previous visits, family and caregiver involvement, other health-care providers involvement in care, personal and professional experiences of the clinician and the patient. Issues related to family, employment, emotions, desires and wants, unmet needs, hidden wishes and concerns, health beliefs, social, religious and spiritual issues are all part of effective communication [15].

The physician who is receptive to patient inquiries and aware of subtle, nonverbal messages can create an environment of safety in which a patient feels protected [14].

Clinicians must use a sensitive approach in communication with the patient who has an interest in NS. This approach utilizes effective communication skills and experience in attentive listening.

A communication approach that fosters a collaborative relationship that includes adequate information exchange, empathy and compassion, responding to emotional needs and managing uncertainty can lead to educated and informed decisions about NS use.

In order to be open to the patient's perspective, and sensitive to his or her need for autonomy and empowerment, physicians may need a shift in their own perspectives. Perhaps the optimal approach is to discuss with the patient and his family, both the facts and the uncertainty of NS use. Today's informed patients truly value physicians who appreciate them as equal participants in making their own healthcare choices [14].

Obtaining reliable information

In the process of developing effective communication with patients about NS use, the next challenge that the physician is faced with, is the large amount of conflicting information about NS in cancer care. With this uncertainty and need to search databases and reliable information sources, most physicians feel frustrated and overwhelmed.

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In order to overcome these obstacles the Clinical Practice Committee of the Society of Integrative Oncology undertook the challenge of providing basic reliable information to physicians that have interest in opening the discussion with their patients about NS use in cancer care. The committee surveyed clinicians with extensive experience in consulting cancer patients about NS use in leading cancer centers in the USA and formed a team of clinical experts [4].

A list of leading NS that have the best suggestions of benefit was constructed by these experts. This list included leading supplements such as curcumin, maitake mushrooms, fish oil, green tea, milk thistle, melatonin, probiotics and others.

The list included basic information on each supplement such as evidence on effectiveness and clinical trials, adverse effects, and interactions with medications if known, and possible dosage. The information was constructed to provide an up-to-date base of knowledge, so physicians and other healthcare providers would be aware of the supplements, and able to discuss realistic expectations and potential benefits and risks. The committee members suggested a few NS that have a better safety profile could help replace a long list of unreliable NS which at times could have potential health risks.

Quality of products

Once the choice about a NS is discussed with patients, then one is faced with another challenge. If patients make a decision to use one of the discussed NS, the quality of the actual product comes into question. Of about 55,000 supplements that are sold in the USA, only 170 (about 0.3%) have been studied closely enough to determine their common side effects. Because the supplement industry operates on the honor

system, studies show the market has been flooded with products that are adulterated, mislabeled or packaged in dosages that have not been studied for safety [16].

In order to overcome this obstacle, consulting with practitioners that have close understanding of this industry can be helpful. Today, in most academic centers in the USA there is an integrative medicine program. In most of these programs, professionals are available for discussions and consultations and can give insight into high-quality products available in the NS market [17]. In addition, independent test results are helpful to consumers and healthcare professionals to identify the best-quality health and nutrition products [18]. Utilizing these resources can help to direct to safe use of high-quality products.

Summary

NS are commonly used by patients affected by cancer. Patients are using these supplements mainly to improve their quality of life in their cancer trajectory. An open and empathic approach to this use is essential for successful patient–doctor communication. An informed approach that takes into consideration NS that are safe, with clues of possible effectiveness can lead to a better decision-making and trust in this communication process.

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