

## Review Article

# Human Breast Milk to Heal Grandma: Just what the Doctor Ordered

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## Abstract

The use of complementary and alternative medicine (CAM) is common amongst cancer patients. Evidence shows these treatment modalities may address physiological and psychological issues not managed by conventional medicine. CAM includes a broad range of treatments, from acupuncture to disproven therapies such as toad skin toxin. The case to be discussed here involved the use of human breast milk to treat advanced cancer. The treatment resulted in a significant benefit to the patient and family. A brief review of CAM and hypotheses regarding motivation for the use of some "exotic" types of CAM, will be followed by the analysis of the clinical case. The discussion will then look at the importance of defining the meaning of healing in cancer care and the benefits of cultural tolerance.

**Keywords:** Human breast milk; Cancer; Complementary medicine; Alternative medicine; CAM; Palliative care

## Introduction

Palliative cancer care must manage the tension between attempts to cure and prolong life, and the acceptance and management of death. The oncologist offers palliative treatments by reducing size and halting spread of the tumor, both of which are measurable targets. The palliative care team concentrates, in a multidisciplinary fashion, on any modality that may alleviate symptoms, many of them subjective and abstract by nature. In addition, an integrating web of beliefs, rumors and practices, nourished and executed by the patient himself and his supporters is aimed at enhancing and sometime replacing the conventional modalities of healing. The role of this web may be even more pronounced where conventional medicine failed, thus demonstrating that healing, like pain, is a multidimensional concept. Tension naturally exists between the evidence-driven world of medicine and the patient's world of beliefs, hope and unproven medicine. The resolution lies in understanding the goal of care of both patient and physician and identifying gaps in communication and perception of these goals. The palliative work is situated perfectly to negotiate the chasm. By not dismissing patients and supporters endeavors in using unproven remedies, we may positively enhance team-patient relationship and gain unexpected benefits. The clinical case presented here was a teachable moment to many of us. It helped us to better define the role of CAM and the individual meaning of healing.

## The Clinical Case

Mrs. K a 76-year-old widower lived alone in an assisted

living facility. The patient had been referred to palliative care for symptomatic management of recurrent anal cancer. Recent palliative radiotherapy was complicated by a heart attack requiring a pacemaker. The complicated medical path left her fatigued, incontinent of faeces with severe burning perianal pain. Local ointments did not help, and opioids caused significant constipation and dysphoria. The family supported a trial of medical cannabis as an oil formulation which caused dizziness and drowsiness and did not relieve pain or distress. Due to pain and fear of incontinence, she avoided socializing with the other residents and became more isolated. She did not want to be a burden to her family. She repeatedly rejected the suggestion of a colostomy. Gradually her physical and emotional state deteriorated. COVID-19 social restrictions exacerbated her isolation, as she was not facile with modern social media technology. She had to make do with frequent phone calls from her family. As days went by her daughters noted increasing distress and dysfunction. During a palliative care clinic review the patient stated there was no reason for her to live any more. Her suffering was multidimensional with poorly controlled symptoms, hopelessness, shame and embarrassment, and social isolation. In addition, she was anxious about disease progression, bowel obstruction and death. Supportive psychotherapy was provided, and a new regime of analgesic was prescribed. Over the next few days, her daughter reported increasing pain. They did not try the opioids prescribed for fear of side effect and after repeated calls it was apparent that the daughters and the mother were stuck – in indecision and fear. It was recommended to admit her to the palliative-oncology ward. However, a few days later the daughters reported her mother was improving slightly and postponed the admission.

Three weeks later they visited the clinic again. This time Mrs. K looked more composed and better groomed. She still had pain and fears for the future. However, gone were the anxiety and hopelessness. She was coping much better. Why? The daughters noted the improvement after she started taking an alternative therapy. The patient's granddaughter had searched the internet and social media and found reports stating that human breast milk can cure cancer. So her three granddaughters, all breast feeding, supplied their grandmother with daily fresh breast milk. Now the pain was better controlled, she no longer questioned her existence and did not ask to

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hasten death. Instead, in the clinic she proudly gave a detailed account of her many descendants. She had re-kindled meaning.

## Complementary and Alternative Medicines: An Overview

The American National Cancer Institute website defines Complementary and Alternative Medicine (CAM) as the "term for medical products and practices that are not part of standard medical care" [1]. There are many forms of CAM ranging from well accepted and honored methods such as acupuncture and homeopathy to more "exotic" methods such as shark cartilage and toad venom. There are even medical procedures not supported by conventional medical guidelines [2,3]. The term Complementary Medicine signifies the use of such methods contemporaneously with standard medical treatment. Integrative medicine is the combination of conventional medicine with scientifically proven effective CAM practices and has become part of the multidisciplinary care offered to cancer patients [4]. In contradistinction, Alternative Medicine uses various substances and techniques, with disproven or unproven benefits. These may be used instead of standard medical treatment, and may be associated with refusal of conventional treatment and worsened survival [5]. Many cancer patients, even those who fully embrace conventional, evidence-based medicine, tend to enhance treatment with complementary treatment approaches. For some of these treatments there is no evidence to support clinical advantage, not even for wellbeing. Cancer patients' use of CAM is global. In two large reviews citing together 113 studies from around the world, common reasons to use CAM were: seeking therapeutic response, having strong belief in CAM, the use of CAM as a last resort, as a means of finding hope, treating cancer, cancer complications and cancer therapy side effects. Other reasons were the use of CAM as holistic treatment, a source for emotional support and wellbeing, a measure to improve general health and immunity, and as a measure of harnessing control over therapy. For some the motivation was the need to feel they did not miss an opportunity by relying solely on conventional therapies [6,7]. Many factors influenced the tendency to use CAM: age, gender, disease states, socioeconomic status, previous CAM use, education, health literacy, attitudes and beliefs, cultural backgrounds, and differences among localities [2,7,8]. A study in cancer patients examining the influence of family on expected benefits of CAM, showed that family endorsement of CAM use was strongly associated with patient expectation of its clinical efficacy, including expectations for cure and improved survival [9]. Holland portrayed the psychological dynamics that may lead to the use of unproven remedies by patients facing advancing disease with low prospects of cure. Difficulty in accepting the dismal prognosis, mistrust in test results, anxiety and depression interplay to create fertile ground for pursuing unproven, miraculous cures [10]. Many patients do not disclose the use of CAM. Reasons for non-disclosure may be banal such as not being asked by the medical team, feeling that the complementary care was irrelevant or, more troubling, fearing doctor's disapproval [11]. Therefore, an open minded, respectful discussion with the patients regarding CAM is encouraged both to better understand patients' needs and to avoid unwanted and unexpected interactions with conventional treatment [12].

## Exotic Examples of CAM

### Ephedra

A few years back, the Ephedra foeminea (Leafless Ephedra), a genus of gymnosperm shrubs, was highly recommended among

the Israeli cancer patients community as a natural, effective and safe cancer remedy. This plant, native to the eastern Mediterranean area, was used in folk medicine for a host of medical conditions. Rumors concerning its effectiveness were reinforced by anecdotal reports and by hints from scientific basic research reports [13,14]. This motivated care-givers to pick the plant in their 'back-yard' or buy from vendors for the purpose of infusions and oils, being 'guaranteed' to hasten recovery.

### Cannabis

These days, the most popular CAM modality among our patients is, by far, medical Cannabis. Cannabis is listed as a Schedule One illicit drug under Israeli drug law but can be licensed to patients suffering from certain medical conditions. Indications for prescribing medical cannabis to cancer patients aim at alleviating symptoms caused by cancer and cancer treatment. Nevertheless, it is acclaimed by the public for its healing capacities, ideas that have no support from the medical literature [15] although heavily supported by social media [16]. Medical cannabis is avidly embraced by cancer patients [17,18]. In a study performed at our palliative clinic nearly 50 percent of patients applying for medical cannabis stated there is good medical evidence that cannabis can cure cancer (unpublished data). While many patients rely on cannabis flowers and oils dispensed under the supervised national health system, some use home-made, concentrated, cannabis products, such as 'Rick Simpson Oil' (RSO) for its alleged proven healing properties [15,19].

### Toad 'vaccine'

Occasionally we encounter rare forms of 'exotic' treatments such as the Kambô ritual. Such was the case of a 70 year-old Israeli lady with stage IV breast cancer and extensive liver involvement. When admitted to the hospital with multi-organ failure, physical examination revealed small wounds on her shins, due to the Kambô ritual she had participated in few days' prior. *Phyllomedusa bicolor*, popularly known as "Kambô", is a large tree frog resident of the Amazonians forests. A potent toxin secreted by the skin of the frog, is used by native Amazonians for a shamanic healing ritual, where it is applied to fresh skin burns made over limbs. This alternative mode of healing migrated to urban society and across continents despite significant risks associated with this treatment [20]. Hints from scientific reports alluding to anti-cancerous potential of the toxin [21] alongside reports in popular media may have driven our patient to this extreme, exotic and unsafe mode of treatment.

### Human breast milk

Uncommonly do patients share with us their thoughts or experience with human breast milk as a remedy for their disease state and symptoms. It is probably impossible to acknowledge the true scale of human breast milk use due to social taboos and degree of awkwardness attributed to the subject. The nutritional and protective properties of human breast milk to the newborn and preterm babies are well established with the practice of human milk donation and banking widely spread across the globe [22]. Accumulating data also suggests a beneficial role in the treatment of skin conditions in babies [23]. Research of human breast milk components suggests some anticancer properties [24,25]. One component appears exceptionally promising: Alpha-lactalbumin. In its partially unfolded form, Alpha-lactalbumin, forms an oleic acid complex, named HAMLET (Human Alpha-lactalbumin Made Lethal to Tumor cells) with proven tumoricidal activity [26] and recently tested in clinical

trials in patients with early bladder cancer. [27,28]. Nowadays, with the proliferation of social media a simple report of a potential new cancer remedy can easily proliferate in the form of fake health news [29]. Personal interpretation of medical reports of human breast milk protein active in a test tube is 'translated' into viewing human breast milk as a medicine against cancer, This encourages its consumption as alternative cancer treatment. Reports in the popular press and a major Internet streaming company documentary, also helped disseminate this belief [30,31]. For the anxious patients and their families these reports fuel hope and allow them to take an active part in the act of healing thus alleviating feelings of impotence guilt and fear.

### **Mrs. K and her Grand-Daughters' Breast Milk**

Our patient came to the palliative clinic seeking much needed help. After the palliative radiation administered by the radiation oncologist failed to alleviate pain and discomfort, she and her family were hoping we might find the solution. Despite offering pharmacological and psychosocial support, we were unable to assist. Extreme anxiety coupled with loneliness and disconnection from all that she cherished drove her to the edge. Mrs. K felt hopeless and she asked us to help her die. In patients with metastatic cancer, even those with over six month's life expectancy, the desire for hastened death is not uncommon [32,33]. Our patient portrayed many of the factors shown to correlate with such desire: living alone, severe symptoms which interfered with her function, hopelessness and low self-esteem secondary to losing her role in the family life. She and her family needed treatment that would restore control and give them hope. Alternative medicine offers hope [6] Internet and social media are efficient vehicles for promoting many such therapies [34]. Our patient turned to alternative forms of treatment in hope of palliation. First, she tried cannabis oil that caused side effects but did not relieve her suffering. Then she turned to human breast milk and this indeed allowed healing, not of the tumor, since this continued to advance, but for relief of the despair, hopelessness and loneliness stemming from poor symptom control, isolation, and loss of meaning. We believe her improvement was not entirely due to placebo effect [35] but to the less tangible effects of treating the patient's "total pain" [36,37]. The recruitment of her granddaughters to supply her with the same milk they fed their babies, her great- grandchildren, helped her reclaim her place in the world and feel how meaningful and important her existence is to those she loved the most. Armed with this kind of devotion she could better cope and endure her suffering. The patient's willingness to accept this act of benevolence from her granddaughters – the reversal of generational roles – helped to maintain her self-esteem and dignity. At the same time she could accept her physical deterioration.

### **Healing and Culture in Cancer Care**

The case of Mrs. K demonstrates the distinction between curing and healing. But what do we mean by healing? The dictionary definition of heal is 'to make something healthy again' [38]. Health sociologists have taught us that the definition of health is subjective [39]. A patient may be diagnosed with multiple illness but will describe himself as healthy. For another person being 'healthy' means not being diagnosed with a disease. From this we can understand how a modality which is ineffective for curing the physical aspects of illness can possess healing properties for other less pressing, aspects of the subject's health. The *raison d'être* of conventional medicine is to cure a disease or significantly change its course. Many CAM methods

in use today are based on ancient traditions and philosophies aimed at healing the whole individual, body and soul, in a direct or indirect manner. The use of CAM in multiple forms is abundant in Israel. Common forms of CAM, many of them originating in faraway places, are already widely endorsed by the Israeli public [40] and supported by the medical community which encourage and study its use [41,42]. The acceptance of new techniques adds to a rich background of a multiethnic society, with folk medicine, religious and spiritual rituals [43]. The increased use of CAM signifies the public's need for solutions not satisfied by modern Evidence Based Medicine. These needs intensify in situations for which modern medicine lacks a solution, such as advanced terminal cancer. In these circumstances, the patient and supporters feel the need to act. They look for cure, healing and hope outside of the realms of conventional medicine. The palliative physician is optimally situated to see the many dimensions of human suffering and therefore to understand potential benefit even in so called quackery. The physician can appreciate the need of the patient to reestablish control over a helpless situation. Taking control of making decisions creates hope [10].

### **Conclusion**

We still have not reached the point where we can ameliorate all human suffering with conventional evidence-based treatments. Therefore it is safe to say there will be always demand for complementary and alternative forms of therapy, be it even the most esoteric and seemingly illogical modalities. One has to bear in mind that it is the patient's perspective that deems treatment of any kind successful. It is sometimes surprising to see the benefits patients and supporters gain. Regardless of the mode of CAM used, the mere initiative to use it, the efforts for its execution and even the financial burden required can unite the patient and his supporters in a healing venture, and rekindle a sense of control and hope in the face of dismal prognosis. Our patients will probably fare better if we show interest in their CAM practices. By maintaining an open, non-judicial, discussion on the matter we may discover unmet needs for which we can offer support and possibly prevent harmful interaction with other modes of treatment.

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