Complementary and alternative medicine among cancer patients and its complications: local experience

Ali Al-Amri¹, Rashed Saeed Alzahrani¹*, Khalid Alhajri¹, Saleh M Alqarzea¹, Faisal Alzahrani¹, Shams Alturky¹

ABSTRACT

Background: In our hospital, cancer patients are exposed to complementary and alternative medicine (CAM) to cure their cancer or heal the symptoms. However, sometimes these remedies end with complications or death. This study aims to explore the benefits and difficulties of CAM among Saudi cancer patients in our region.

Methods: A cross-sectional, observational questionnaire-based study that included Saudi cancer patients treated with complementary medicine attending our hospital from 2010 to 2018.

Results: A total of 80 cancer patients participated in this study. The most prominent type of CAM was Rukaya, 30%, followed drinking Zamzam water, 26.83%. Fortunately, these two types of CAM had no complications. Drinking camel products was reported by 25% of cancer patients. This type of remedy had led to the deaths of two cancer patients. Cautery use was reported by 15% of cancer patients and had led to local infection (cellulitis) at the cautery site in three users, and two cancer patients had succumbed to sepsis. Our patients documented no benefits.

Conclusion: In this study, CAM usage has no beneficial effects; some has reported harmful to cancer patients, including morbidity and mortality. These findings call for the urgent need for further in-depth study of CAM products to explore their beneficial effects and point out their complications.

Keywords: Rokia, cautery, cancer, camel, complementary, milk.

Introduction

Cancer is one of the significant devastating diseases and is associated with depression, loss of hope, and feeling of imminent death. Cancer patients, therefore, do their best to find a way to cure their malignant disease and alleviate their symptoms. One of cancer patients’ options of therapy is complementary and alternative medicine (CAM). CAM refers to a wide range of products and ritual practices used by cancer patients alone or in conjunction with conventional therapy [1,2]. Complementary medicine is defined as therapy that complements the standard treatment or is given in conjunction with conventional therapy [2]. Alternative therapy is defined as therapy that is used instead of standard therapy [2]. CAM used by our cancer patients included: Rokia: it is an Arabic term which refers to wholly book words recited on an area of the body with blowing air from the healer’s mouth; Zamzam water is the blessed water from Zamzam well in Makkah; Camels milk and Camels urine: religious belief that drinking of Camels milk and/or urine is curative medicine; cautery: it is an instrument used to destroy abnormal tissues by burning; and Tameemah: (Amulets) are things made from pearls, bones or papers with written text or drawings, and it is worn on the necks or hands of cancer patients to heal the disease.

The most critical concerns about these types of CAM are side effects, including morbidity and mortality either when they are used alone or along with the standard treatment of malignant disease. In addition, the lack of...
regulatory control and guidelines raises severe concerns about CAM usage [1,3,4]. This study, therefore, focuses on types of CAM and evaluation of the outcome of these kinds of therapies in our cancer patients.

**Methods**

An observational cross-sectional design was used to explore the benefits and complications of CAM usage. Information was collected from cancer patients, family members, and charts of the patients. For this study, the authors constructed a questionnaire regarding demographic characteristics of patients, type of cancer, and types of CAM, benefits, and complications of these remedies. The questionnaire consisted of three main parts. The first was primary demographic data, including gender, age, educational level, diagnosis of cancer as shown in Table 1. The second concerned the type of cancer, as reported in Table 2. The third part of the questions was directed to the type of CAM, the definition of CAM, and specific benefits and complications of CAM, as shown in Table 3. A pilot test was done on five cancer patients for testing the clarity. Complications were confirmed by examination of the patients or from reviewing the patient’s charts at our hospital. The cancer patients or cancer patients with their family members attending at King Fahad Hospital of the university at Al-Khobar were recruited in this study. Charts and investigations were reviewed to confirm CAM complications or benefits at our hospital. Data of 80 cancer patients who have used CAM in addition to the standard medical therapy were included in this study as shown in Table 1. All cancer patients who met the inclusion criteria during the study period were included. Aim and information about the research were explained verbally to each respondent and consent was sought before the participation by trained medical students. All invited respondents agreed to participate. Data also were collected from physicians and nurses relative to cancer patients. All participants responded verbally to the questions asked by the interviewers. Data obtained from the questionnaire or found in patients’ charts were studied and analyzed using simple statistics and calculations.

**Results**

A total of 80 cancer patients were interviewed, and their charts were retrieved and reviewed as well. The majority of patients were male 56.5%, 50 years old, and above were 61.25%. More than half of patients received at least secondary level education (56.25%) and 0% reported benefits of CAM. In comparison, 100% said no clear evidence that CAM improves their malignant disease or alleviates their symptoms. About 18% of all CAM users reported complications; cautery ulcer infections 11.25%, sepsis 6.25%, and unfortunately 2.5% died secondary to Camel products complications Table 1. Three-quarters of patients had colorectal cancer, breast cancer, or lymphoma, as shown in Table 2. Rukaya users were 30%, and none of these cancer patients reported benefits or developed complications secondary to this type of CAM. Zamzam water users were 26.83% and reported 0% benefits and reported no side effects. Camel products users were 25%, they reported no benefits or cure of their cancer, but unfortunately, 20% of Camel products users either developed sepsis or have died. Tameemah users were 2.5% only and reported no benefits and no complications, as shown in Table 3.

**Discussion**

To the authors’ knowledge, the current findings are the first to report the benefits and complications of CAM use among Saudi patients with cancer. The term CAM refers to a group of traditional products and religious practices that are may or may not include the standard therapy [5-7]. In Saudi Arabia, the use of CAM is every day and mainly growing among patients suffering from malignant diseases [8].

**Forms of CAM used**

In evaluating the types of CAM modalities used by our cancer patients, we found five kinds of CAM used by

<table>
<thead>
<tr>
<th>Cancer type</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colo-rectal cancer</td>
<td>26</td>
<td>(32.5)</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>24</td>
<td>(30)</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>10</td>
<td>(12.5)</td>
</tr>
<tr>
<td>Testicular</td>
<td>4</td>
<td>(5)</td>
</tr>
<tr>
<td>Prostate cancer</td>
<td>4</td>
<td>(5)</td>
</tr>
<tr>
<td>Ovarian cancer</td>
<td>3</td>
<td>(3.75)</td>
</tr>
<tr>
<td>Lung</td>
<td>3</td>
<td>(3.75)</td>
</tr>
<tr>
<td>Leukemia</td>
<td>3</td>
<td>(3.75)</td>
</tr>
<tr>
<td>Hepatocellular carcinoma</td>
<td>2</td>
<td>(2.5)</td>
</tr>
<tr>
<td>Osteosarcoma</td>
<td>1</td>
<td>(1.25)</td>
</tr>
</tbody>
</table>

**Table 2. Type of cancers.**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>CAM users NO. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
<td>46 (57.5)</td>
</tr>
<tr>
<td>Age</td>
<td>Female</td>
</tr>
<tr>
<td>≤50 years</td>
<td>31 (39)</td>
</tr>
<tr>
<td>&gt;50 years</td>
<td>49 (61)</td>
</tr>
<tr>
<td>Educational status</td>
<td>Secondary school or less</td>
</tr>
<tr>
<td>Higher educations</td>
<td>19 (43.75)</td>
</tr>
<tr>
<td>CAM</td>
<td>45 (56.25)</td>
</tr>
<tr>
<td>Benefits</td>
<td>0 (0)*</td>
</tr>
<tr>
<td>No improvement</td>
<td>80 (100)</td>
</tr>
<tr>
<td>Complications:</td>
<td></td>
</tr>
<tr>
<td>Death</td>
<td>2 (2.5)</td>
</tr>
<tr>
<td>Sepsis</td>
<td>2 (2.5)</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>3 (3.75)</td>
</tr>
</tbody>
</table>
our cancer patients, including Roqiah, Zamzam water, Camel products, cautery, and Tameemah. All of these CAM forms are available in our community without prescription or medical supervision. With the help of our cancer patients and their family members, each of the above forms of CAM is defined accordingly.

**Roqia**

It is a religious term referring to a traditional therapy in which words of the whole book of Quran are recited many times on the site of the painful area or diseased organ with blowing air from the healer’s mouth on the affected part body of patients.

**Zamzam water**

It is water on which holy book, Quran, was recited and coming from Zamzam well in Makkah as requested by cancer patients.

**Camel’s products**

Products of Camels included milk, and some patients said this milk should be from young Camel, which means after the first delivery of the Camel. The other product is urine. Some patients consumed pure milk, milk mixed with urine or pure urine. These types of products were given to the patients by Camel farmers upon request of cancer patients.

**Cautery**

Type of cautery; there were two types of cautery observed in our cancer patients. One type is cauterizing the lump itself with a small piece of steel with one or multiple cauterization (burn) that affects the whole layer of skin and sometimes deeper to the subcutaneous tissues. The other type was many small superficial cauterizations with special character and distribution on the cancer patient’s body. All cauterization was carried outside the hospital, either at the home of cancer patients or at the home of the healer.

**Tameemah (Amulets)**

It is a paper with wholly written text or drawings worn on the necks or hands of patients to get rid of evil and cure cancer.

### Benefits of CAM

All of our cancer patients were receiving CAM remedies besides conventional therapy except one. As mentioned above, there were five forms of CAM. The majority of our patients reported that they were not under the supervision of their physicians while using CAM besides their standard medical therapy. All of our cancer patients have said that the reasons for using CAM were to cure their malignant disease. However, none of our cancer patients who used these five forms of CAM besides the standard therapy of cancer reported any clear clinical benefits. The benefit is defined by the patient’s term and simplified by the question: did you think you benefit from the CAM therapy or not. To the best of authors’ knowledge, no single study has proved any clear clinical benefits regarding cancer outcomes. One study has reported that there was no significant association between CAM use and quality of life (QOL) [9]. Two studies investigated the therapeutic effects of camel milk on mice cancer but showed the preliminary and unclear impact [10,11]. So far, there is not enough data about CAM therapy regarding its clinical benefits and curative value in treating malignant diseases.

### Complications of CAM

Patients who are suffering from cancer believe that CAM is natural, safe, holistic, and harmless. However, there is evidence that some CAM is toxic and not free from harm. Therefore, high-quality clinical trials and researches are needed to clarify potential therapeutic effects and adverse outcomes of CAM [12-14].

In this study, we found three forms of CAM are free of side effects. These forms are: Roqiah, Zamzam water, and Tameemah were the benign type of CAM since none of our cancer patients has reported complications related to such kind of CAM. Therefore, these three forms of CAM treatments did not cause harm to our cancer patients. Usage of CAM may lead to unpredictable outcomes because the amount of the natural products used, duration of therapy, contamination, or interaction with other medication will affect the outcome. Many studies have reported concerns regarding direct or indirect adverse events of CAM [15-19]. Our study
Complementary and alternative medicine among cancer patients and its complications

Our study, like any other, suffers from a number of limitations including bias toward CAM, and the participant responses may be affected by interviewer bias. The sample size was small and spans over 10 years which can create response of bias and generalizability. However, this study was based on face-to-face interviews with patients and their family members and supported with retrospective evaluation of patients’ charts. This study gives an idea on different and important aspects of CAM use among patients with cancer.

Conclusion

The utilization of CAM by cancer patients is not beneficial and is harmful. There is an urgent need to promote research in CAM to address each form of CAM individually. In the absence of controlled clinical trials, proving the safety and efficacy of using these forms of CAM by cancer patients remains theoretical.

List of Abbreviation

CAM Complementary and alternative medicine

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Funding

None.

Consent to participate

Informed consent was obtained from all the participants.

Ethical approval

The ethical approval for this study was obtained from the IRB committee of Imam Abdulrahman Bin Faisal University.

Author details

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