



The Application of Complementary Medicine Methods Applied for Psychological Support and Relaxation in Cancer Patients

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Background: The purpose of the study was to determine the application of complementary medicine and psychological support and relaxation methods in cancer patients.

Methods: The study was carried out on 60 cancer (35 men, 25 women) patients between the ages of 16-77 years using a "face to face interview technique".

Results: The most common cancer type was found as lung cancer among men and breast cancer among women related to the type of cancer diagnosis. The 61.7% of patients applied complementary medicine methods. Garlic was seen as one of the complementary bio-based products and it was used by 83.3% of the patients. This rate was 91.7% for onion, 38.3% for broccoli, 56.7% for red cabbage, 8.3% for kefir, 26.7% for green tea, 28.3% for pomegranate juice, 10.0% for fish oil, 6.7% for flax seed, 11.7% for ginger, 23.3% for black seed, 36.7% for nettle and 8.3% for bee pollen.

Conclusion: Some complementary therapies either may decrease the effectiveness of conventional medical treatment or may interact with drugs. It has been found that patients applied complementary medicine methods have preferred herbal treatment commonly. Furthermore, some of the patients have applied prayer, music, and massage for psychological support and relaxation.

Key Words: Complementary Medicine; Psychological Support; Relaxation; Cancer.

Kanserli Hastaların Tamamlayıcı Tıp Uygulama Durumu ve Psikolojik Destek/Rahatlama İçin Başvurdukları Yöntemler

Amaç: Bu çalışmada; kanserli hastalarda tamamlayıcı tıp yöntemlerini kullanma durumunun ve psikolojik destek/rahatlama için başvurdukları yöntemlerin araştırılması amaçlanmıştır.

Yöntem: Çalışma, 16-77 yaşları arasında 60 (35 erkek, 25 kadın) kanser hastasıyla yüz yüze görüşme tekniği kullanılarak yapılmıştır.

Bulgular: Araştırmaya katılan bireylerin almış oldukları kanser tanı tiplerine göre dağılımı incelendiğinde; erkek hastalarda en fazla akciğer kanseri, kadın hastalarda ise en fazla meme kanseri görülmüştür. Araştırmaya katılan hastaların %61.7'sinin tamamlayıcı tıp yöntemlerine başvurduğu bulunmuştur. Hastaların, tamamlayıcı biyolojik temelli ürünler arasında yer alan sarımsağı %83.3'ü, soğanı %91.7'si, brokoliyi %38.3'ü, kırmızı lahanayı %56.7'si, kefirini %8.3'ü, yeşil çayı %26.7'si, nar suyunu %28.3'ü, balık yağını %10.0'ı, keten tohumunu %6.7'si, zencefilini %11.7'si, çörek otunu %23.3'ü, ısırganı %36.7'si, arı polenini %8.3'ü kullanmıştır.

Sonuç: Bazı tamamlayıcı tıp tedavileri konvansiyonel tedavilerin etkinliğini azaltabilir, ilaçlarla etkileşime girerek ciddi ve yaşamı tehdit edici yan etkilere neden olabilir. Tamamlayıcı tıp tedavi yöntemleri içerisinde sıklıkla biyolojik temelli tedaviler (besin, bitki, vitamin) kullanılmaktadır. Buna ek olarak, bazı hastaların psikolojik destek almak ve rahatlamak amacıyla dua, müzik ve masaj gibi yöntemlerden yararlandıkları da görülmektedir.

Anahtar Kelimeler: Tamamlayıcı Tıp; Psikolojik Destek; Rahatlama; Kanser.

The implementation of alternative or complementary therapies as well as conventional medicine has increased today; depending on progressing rapidly of cancer, which is one of important diseases threaten human health. Complementary medicine is the method which patients apply in addition to conventional treatment. Whereas, alternative medicine is the treatment approach

which is used instead of conventional treatment. The National Center for Complementary and Alternative Medicine (NCCAM) was established in 1991 to examine the safety and efficacy of complementary and alternative medicine practices and ensure the participation of practices proven effectiveness scientifically to conventional treatments. Complementary and alternative medicine methods are

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grouped under five main headings: mind-body medicine, alternative medical systems, biological treatments, manipulative systems for body and energy therapies. "Complementary" therapies are defined as supportive methods to complete the evidence-based conventional methods by American Cancer Society (ACS). Meditation to reduce stress, acupuncture to relieve pain, and the use of ginger against nausea are examples of complementary therapies. Complementary methods are not curative in the treatment of disease, on the other hand they help controlling symptoms.¹

"Alternative" treatments are the methods which have not been tested scientifically or have been tested and found to be inefficient, not evidence-based methods. If alternative methods are used instead of conventional treatment, patients may be suffering from the harmful effects of alternative therapy or not receiving conventional therapy. Moreover, personal references are taken into account in terms of efficacy and safety of methods used. Nutritional methods often used within complementary and alternative medicine are vitamins, minerals, herbal supplements and some types of diet.²

Many drugs in the class of antineoplastic agents cause high oxidative stress in biological systems. In studies, it has been found that the implementation of intravenous glutathione (GSH) before the implementation of cisplatin (antineoplastic agents) decrease toxicity without decreasing anticancer activity of drug. It is needed intensive clinical studies to determine short and long-term effects of antioxidants on chemotherapy and side effects of chemotherapy.³

The aim of this study was to determine the application of complementary medicine methods in cancer patients treated in Hacettepe University Oncology Hospital and investigate methods applied for psychological support and relaxation.

Materials and Methods

This study was carried out using a "face to face interview technique" between December 2007 and January 2008. We randomly selected 60 (35 men, 25 women) cancer patients between the ages of 16-77 years. The questionnaire applied to the patients included questions for general information. We aimed to determine the application of complementary medicine methods applied for psychological support and relaxation in cancer patients treated in Hacettepe University Oncology Hospital. The questions about the patients provided to learn general characteristics (gender, education level, marital and economic status, occupation, etc.), cancer history, anthropometric measurements (body weight (kg), height (cm), body mass index -kg/m²), smoking habits, application of

complementary and alternative medicine (CAM) methods (products like some foods, vitamins and biologically-based components used as CAM methods) and application of emotional freedom techniques (EFT).

Data Analysis

Data was analysed using SPSS Version 15.0. Descriptive statistics were generated for all study variables, including mean±S.D. for continuous variables and relative frequencies for categorical variables. The Chi-square and unpaired t test were used to explain relations between subgroups. Two-sided values of $p < 0.05$ were considered statistically significant.

Results

The median value of the age of 60 patients included in the study has been found 55.5±19.5 years. Of the patients 58.3% (35 patients) was male and 41.7% (25 patients) was women. The 33.3% of all patients was primary school graduates. It was found no statistical difference between gender and education, marital, economic status of patients ($p>0.05$). On the contrary, differences between gender and professions were found statistically important ($p<0.01$). The 42.9% of the male patients was retired, 31.4% was engaged in self-employment. The 84.0% of the female patients has been found to be a housewife.

The families of 23.3% of patients have cancer diagnosis. The elapsed time after cancer diagnosis has been found less than one year in the 53.3% of patients included in the study, 1-5 years in the 33.3%; and more than five years in the 11.7% of the patients. Table 1 shows the general characteristics of patients included in the study.

The body weight of the patients varied between 38.0 kg and 125.0 kg (median: 70.0±19.50 kg), body mass index (BMI) varied between 14.0 kg/m² and 43.3 kg/m². The median value of BMI was found 22.9±6.0 kg/m² in male patients and 27.1±7.65 kg/m² in female patients. While 88.0% of the female patients never smoke, this rate has been found decreased as 31.4% in the male patients. Mean duration of smoking has been found to be 26±2.9 years in men. The differences between gender distribution and having cancer type of the patients have been found to be statistically significant ($p<0.01$). The most common type of cancer was seen lung cancer (22.9%) among male patients and breast cancer (28.0%) among female patients. The most common types of other cancers were lymphoma and leukemia both men and women. Table 2 shows the distribution of cancer types of the patients.

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The distribution of methods used as patients related to gender is shown on (Table 3). complementary/alternative medicine among the

Table 1. Distribution of general characteristics of patients (n: 60)

	Men			Women			Total		
	$\bar{X} \pm SD$	median	min-max	$\bar{X} \pm SD$	median	min-max	$\bar{X} \pm SD$	median	min-max
Age (year)	51.3±6.8	55.0	16.0-73.0	53.6±5.1	56.0	17.0-77.0	52.2±6.0	55.5	16.0-77.0
Body weight(kg)	69.6±17.0	70.0	39.5-125.0	66.7±15.3	70.0	38.0-90.0	68.4±16.3	70.0	38.0-125.0
Height (cm)	170.9±7.2	170.0	157-187	158.3±5.1	159.0	145-170	165.7±8.9	165.0	145-187
Body mass index (kg/m²)	23.8±5.5	22.9	14.0-43.3	26.7±6.6	27.1	14.3-42.8	25.0±6.1	24.2	14.0-43.3
The year of smoking cessation	26.0±13.7	26.5	8.0-55.0	20.0±8.7	15.0	15.0-30.0	25.3±13.2	25.0	8.0-55.0
The number of cigarettes smoked/day	17.5±10.6	17.5	10.0-25.0	-	-	-	17.5±10.6	17.5	10.0-25.0
Duration of smoking/year	40.5±20.5	40.5	26.0-55.0	-	-	-	40.5±20.5	40.5	26.0-55.0

Table 2. Distribution of cancer types of the patients

Cancer type	Men		Women		Total	
	n	%	n	%	n	%
Breast	-	-	7	28.0	7	11.7
Head-neck	3	8.6	-	-	3	5.0
Colon-rectum	2	5.7	1	4.0	3	5.0
Lung	8	22.9	-	-	8	13.3
Lymphoma	7	20.0	5	20.0	12	20.0
Cervical	-	-	1	4.0	1	1.7
Stomach	1	2.9	4	16.0	5	8.3
Esophagus	-	-	1	4.0	1	1.7
Liver	2	5.7	-	-	2	3.3
Pancreas	-	-	1	4.0	1	1.7
Skin	1	2.9	-	-	1	1.7
Leukemia	7	20.0	4	16.0	11	18.3
Bone	1	2.9	1	4.0	2	3.3
Testicular	2	5.7	-	-	2	3.3
Metastatic carcinoma (in the lumbar region)	1	2.9	-	-	1	1.7
Total	35	100.0	25	100.0	60	100.0

($X^2=29.436$, $p=0.009$)

Table 3. Distribution of complementary/alternative medicine methods related to gender among patients

CAM methods	Yes		No		Total	
	n	%	n	%	n	%
Men	21	60.0	14	40.0	35	100.0
Women	16	64.0	9	36.0	25	100.0
Total	37.0	61.7	23	38.3	60	100.0

In this present study, it has been found that 61.7% of the patients has applied for complementary/alternative medicine (CAM) methods.

Patients who use CAM methods have applied these methods, in addition to conventional treatment. Therefore, it has been seen that these patients have

preferred complementary medicine. Table 4 indicates the distribution of complementary/alternative medicine methods related to education status.

In our study, 33.3% of the patients has found to be graduated from primary school and the 75.0% of them has applied CAM methods. The 43.2% of the patients used CAM methods during conventional cancer treatment. Patients started to use these methods because of being affected from friends (37.8%), media (29.7%), and family members (27.0%).

It has been reported that 89.2% of the patients have used these methods without consulting a doctor or a dietitian. Causes of application for complementary medicine methods have been found as helping control of disease (51.4%), believing useful effects of complementary medicine methods (32.4%) and reducing side effects of conventional cancer treatment (13.5%). Table 5 shows the distribution of the patients according to application periods of CAM products.

Table 4. Distribution of complementary/alternative medicine methods related to education status

CAM methods	Yes		No		Total	
	N	%	n	%	n	%
Illiterate	4	50.0	4	50.0	8	100.0
Literate	1	25.0	3	75.0	4	100.0
Primary school	15	75.0	5	25.0	20	100.0
Secondary school	6	66.7	3	33.3	9	100.0
High school	9	75.0	3	25.0	12	100.0
University	2	28.6	5	71.4	7	100.0
Total	37	61.7	23	38.3	60	100.0

Table 5. Distribution of the patients included in the study according to application periods of CAM products

	Before and after diagnosis						After diagnosis					
	Men		Women		Total		Men		Women		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Garlic	29	82.9	19	76.0	48	80.0	2	5.7	-	-	2	3.3
Onion	32	91.4	23	92.0	55	91.7	-	-	-	-	-	-
Broccoli	11	31.4	1	4.0	12	20.0	3	8.6	8	32.0	11	18.3
Red cabbage	22	62.9	12	48.0	34	56.7	-	-	-	-	-	-
Soy	2	5.7	1	4.0	3	5.0	-	-	-	-	-	-
Kefir	1	2.9	-	-	1	1.7	1	2.9	3	12.0	4	6.7
Blackberry	3	8.6	1	4.0	4	6.7	-	-	-	-	-	-
Green tea	3	8.6	2	8.0	5	8.3	6	17.1	5	20.0	11	18.3
Pomegranate juice	5	14.3	2	8.0	7	11.7	7	20.0	3	12.0	10	16.7
Ginger	1	2.9	-	-	1	2.7	2	5.7	4	16.0	6	10.0
Black seed	2	5.7	-	-	2	3.3	3	8.6	9	36.0	12	20.0
Rosehip syrup	-	-	--	-	-	-	1	2.9	-	-	1	1.7
Fish oil	2	5.7	-	-	2	3.3	1	2.9	3	12.0	4	6.7
Flax seed	-	-	-	-	-	-	-	-	4	16.0	4	6.7
Daisy	-	-	-	-	-	-	1	2.9	-	-	1	1.7
Stinging nettle	2	5.7	1	4.0	3	5.0	14	40.0	5	20.0	19	31.7
Bee pollen	-	-	-	-	-	-	3	8.6	2	8.0	5	8.3
Aloe vera	1	2.9	-	-	1	1.7	-	-	-	-	-	-
Ginseng	-	-	-	-	-	-	-	-	1	4.0	1	1.7
Barley water	-	-	-	-	-	-	-	-	1	4.0	1	1.7
Grape seed	-	-	-	-	-	-	1	2.9	1	4.0	2	3.3
Shark cartilage	-	-	-	-	-	-	-	-	1	4.0	1	1.7
Artichoke capsules	-	-	-	-	-	-	-	-	1	4.0	1	1.7
B group vitamins	1	2.9	-	-	1	1.7	-	-	-	-	-	-
Vitamin C	-	-	1	4.0	1	1.7	2	5.7	1	4.0	3	5.0
Vitamin D	-	-	1	4.0	1	1.7	2	5.7	1	4.0	3	5.0
Vitamin E	-	-	1	4.0	1	1.7	2	5.7	1	4.0	3	5.0
Beta carotene	-	-	-	--	-	-	1	2.9	-	-	1	1.7

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According to gender, differences among application periods of the patients for CAM products have not been found to be statistically significant except broccoli ($X^2=10.786$, $p=0.013$). It has been seen that 8.6% of male patients and 32.0% of female patients have started to consume broccoli after diagnosis. The 18.3% of the patients has started to consume green tea after diagnosis. This rate has been found 16.7% for pomegranate juice, 20.0% for black seed, 10.0% for ginger, 31.7% for stinging nettle. Furthermore, garlic, onion, red cabbage, soy, blackberry, vitamin B, vitamin C, vitamin D, vitamin E, beta carotene, fish oil, daisy, bee pollen, aloe vera, ginseng, rosehip syrup, grapeseed, shark cartilage capsules, and artichoke capsules have been used by the patients.

It has been found that 59.5% of patients have used biologically based complementary therapies during cancer treatment. Table 6 represents the application for emotional freedom techniques (EFT) in the patients. It has been applied as prayer (45.0%), music (15.0%), and massage (5.0%) for relief and psychological support (Table 6).

Table 6. Distribution of application for emotional freedom techniques (EFT) of the patients

	Men		Women		Total	
	n	%	n	%	n	%
Massage	1	2.9	2	8.0	3	5.0
Prayer	18	51.4	9	36.0	27	45.0
Music	7	20.0	2	8.0	9	15.0
Total	26	74.3	13	52.0	39	65.0

Using complementary medicine methods have been found to be useful by 59.5% of patients applied complementary medicine methods. Whereas, these methods have been found as ineffective for 16.2% of them, sometimes useful for 8.1% and harmful for 2.7% of them. The 13.5% of them has used these methods without knowing effects of the methods.

Discussion

Complementary medicine includes methods, applications, and components using in addition to conventional treatment. Psycho-oncology, physical activity, massage, acupuncture, music or picture therapy, some kinds of tea, minerals and other nutritional supplements are examples for complementary medicine.

Alternative medicine is named as “non-conventional methods” used for treatment instead of conventional medicine. The effects of most of these methods or components have not been proved. Advocates of alternative medicine can recommend methods or

components, which is not based on scientific evidence and have unknown effects to patients. In Germany, Austria and Switzerland, 40.0-80.0% of cancer patients has used complementary or alternative medicine.⁴ In this present study, it has been found that 61.7% of the patients has applied complementary medicine methods.

Today, cancer is an important disease that progresses rapidly and threatens human health. Therefore, usage of complementary medicine methods have been widespread among cancer patients. It has been stated that cancer patients were the highest users of complementary medicine methods and estimated that 88.0% of cancer patients were using complementary and alternative medicine (CAM) methods.

The belief that herbal supplements are “natural” and therefore even higher doses of them are beneficial is totally wrong. Many vitamins and herbal compounds are toxic in high doses. Beta-carotene was thought as safe and useful previously, but after it was tested in two major study, it has been found to increase the risk of lung cancer in heavy smokers.

Although the anti-nausea properties of ginger, it may not be effective antiemetic agent during chemotherapy because ginger has local effects in the stomach, not on the central nervous system. Against nausea induced by chemotherapy, it is required specific drugs to prevent the stimulation of emetic responses at the level of central nervous system. Ginger and foods or drinks containing ginger may be calming in some people. However, it has been shown that high doses of ginger (in tablet form) cause depression and cardiac arrhythmia.²

Mollasiotis et al.⁵ investigated the use of complementary and alternative medicine (CAM) in cancer patients across a number of European countries. It has been found that CAM is popular among cancer patients with 35.9% using some forms of CAM (range among countries 14.8% to 73.1%). Herbal medicines and remedies have been found to be the most commonly used CAM therapies. The CAM users were mainly younger people, female and higher educational level.

Gratus et al.⁶ investigated the usage of herbal medicines in cancer patients. They have emphasized that reliable information resources are limited for patients although it is known that the usage of some herbal medicines negatively interact with conventional cancer treatment and they are contraindicated in certain cancer types.

Schieman et al.⁷ focused on determining the application of complementary and alternative medicine (CAM) among general surgery, hepatobiliary surgery and surgical oncology patients. It has been found significantly more CAM usage among cancer patients

(34%) versus noncancer patients (21%). Furthermore, the usage of CAM was more common in patients with unresectable cancer (51%) than resectable cancers (22%). There was found no significant differences in the application of CAM between men and women. The most common CAM type was herbs and/or supplements (58% of all users).

In several studies, it has been reported that CAM usage is more common in female individuals who are high level educated and wealthy. Studies have shown that both demographic factors and disease affect CAM application.⁸

Ceylan et al.⁹ studied on the usage of complementary and alternative medicine (CAM) among Turkish cancer patients. It was found that 61.0% of the patients used at least one CAM method. The birthplace, educational status, and family type were significant factors in CAM usage. The cancer patients born in villages, having less education and living in large families were more likely to use folk medicine.

In this present study, it has been found that 61.7% of the patients have applied one of complementary/alternative medicine (CAM) methods. The 33.3% of the patients was found to be graduated from primary school and 75.0% of them has applied CAM methods. Tendency to apply CAM methods has been found to be higher in patients with low education level.

Armstrong et al.¹⁰ studied the effect of using CAM methods and life quality of patients with brain tumors. The 34.0% of 101 patients was found to use CAM methods. The 74.0% of patients using CAM methods have applied CAM methods without consulting doctor. In terms of quality of life, it has not been found to be significant difference between patients who use or not use CAM methods.

In a study conducted on lung cancer patients (n:111), 23.6% of the patients have found to use CAM methods after diagnosis. The most popular CAM method was found herbal therapy (48.1%) and it has been noted that the use of plants has increased three-fold after diagnosis. CAM therapies have been used by the patients to enhance the ability of body's defense against cancer.¹¹

In recent studies, it has been reported that fish oil prevents cancer cell growth and proliferation in colorectal, breast and prostate cancers. Moreover, fish oil is effective to avoid the loss of appetite and weight loss. It has been found that implementation of chemotherapy drug paclitaxel with DHA found in fish

oil is more effective destroying tumor in lung cancer patients.¹²

Kim et al.¹³ found out the relationship between fish or omega-3 fatty acid intake and risk of breast cancer. The increase in fish consumption has been found to reduce breast cancer risk in both pre and postmenopausal women. Mernitz et al.¹⁴ reported that fish oil (maintaining balance of n-6/n-3 PUFA-polyunsaturated fatty acids) may be useful in preventing lung cancer. In many studies, it has been reported that green tea has beneficial effects on different cancers (lung, colon, esophagus, mouth, stomach, kidney, pancreas, breast glands). These beneficial effects of green tea have been stated to be associated with catechine especially epigallocatechine-3-gallate content of green tea. It has been stated that tea components have antioxidant, anti-mutagenic, and anti-carcinogenic effects and they could be protective against the risk of cancer which are increased by environmental agents.¹⁵

Coskun et al.¹⁶ stated that flax seed have reduced the incidence of colon, breast and lung tumors in rodent and daily consumption of 10 grams of flax seed may reduce breast cancer risk. Studies show that the number and size of cancer cells in skin cancer mice have decreased consuming flax seed. Onat et al.¹² explained the implementation of tamoxifen (a chemotherapy drug) with flax seed to non-estrogen-dependent breast cancer patients have increased the effect of tamoxifen. It has been found a reduction in tumor growth at a rate of 30.0% in breast cancer patients who have consumed 25 g of flax seed daily compared with breast cancer patients not consuming flax seed.

It has been indicated that antioxidant supplements may be protective against free radicals occurring during anticancer effect. In a pilot study, it has been reported a reduction of toxicity caused by chemotherapy using vitamin C, beta carotene and total carotenoids as supplements in acute lymphoblastic leukemia children. It has been found that supplementation of glutamine is effective in reducing mucosal inflammation in children who underwent bone marrow transplantation.¹⁷

It has been reported that diets applied as one of the CAM methods have three basic functions. These functions are detoxification, strengthening the immune system and having a potential to fight cancer cells. The most widely used dietary therapy is reported as "macrobiotic diet". Physical activity, avoiding exposure to pesticides, and other chemicals and the necessity of staying away from stress are emphasized in macrobiotic diet. In this kind of diet, patient's age, gender, physical activity level, environmental factors, cultural dietary habits and food supply opportunities are taken into account. Under macrobiotic diet, organic and unprocessed foods are recommended. In recent studies,

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it has been emphasized to consume whole-grain products at a rate of 40-60% and vegetables at a rate of 20-30% in a diet. It is indicated that macro-biotic diet reduces fat and cholesterol intake, affects body weight loss positively. Thus, this diet may decrease the incidence of cancer in adults. However, it is emphasized that macro-biotic diet causes insufficiency of important nutrients intake. This diet may be dangerous in cancer patients whose energy and nutrient requirement have increased and especially vitamin D, zinc, calcium, iron, and vitamin B₁₂ deficiencies have been common.¹⁸

Many researchers have shown that various CAM agents have stimulated the activation of natural killer cells. For example, green tea and some kinds of lactic acid bacteria was found to increase the activation of natural killer cells.¹⁹ It has been reported that nutrients reduce the severity of infectious diseases providing improvement in suppressed immune system. Probiotics provide the stabilization of intestinal microfloras and they are effective in improving of the immune system. Vitamins (A, C, E vitamins), minerals (selenium, zinc) and fatty acids (anti-inflammatory n-3 polyunsaturated fatty acids) affect cellular function by protecting the cell membran. Furthermore, arginine and glutamine amino acids have positive effect on the immune system. Glutamine is a nutrient source of immune system cells and is the precursor of glutathione. Arginine is a substrate for the synthesis of nitric oxide which helps to ensure the growth of T-cells.²⁰

In a study which was conducted on breast (n=126), prostate (n=114) and colorectal (n=116) cancer patients, it has been reported that 66.3% of the patients have changed their lifestyle, 40.4% of the patients have made dietary changes (chosen more vegetables and fruits, less red meat and fat, more healthy foods), 20.8% of the patients have tended new physical activity (aerobic exercise, yoga, tai chi) and 48.0% of them has used nutritional supplements (multivitamin, vitamin E, vitamin C, garlic, echinacea, etc.). As a result of this study, it has been stated that diet and physical activity habits recommended by American Cancer Society (such as consuming more healthy foods, doing aerobic activities) have a positive impact on health and well-being case. On the other hand, other applications (vitamin C, garlic, echinacea use, etc) may cause negative effects on health, especially during chemotherapy and radiotherapy.²¹

It has been reported that the use of dietary supplements in the United States has increased significantly since 1994. The usage of dietary supplements (folic acid, minerals such as calcium and selenium, vitamins containing antioxidants such as vitamin C and E, etc.) has been found to be common among cancer patients, especially in young and educated women. In addition, it

is indicated that approximately 35.0% of elderly patients have used complementary therapies (especially herbal therapy, exercise and relaxation from psychological aspects).²²

In a study conducted by the American Association for Cancer Research on Diet, Nutrition and Cancer, it has been reported that 84.0% of pediatric oncology patients, 50.0% of breast cancer patients and 37.0% of prostate cancer patients have used complementary/alternative medicine methods and these patients have adopted especially bio-pharmaceutical and herbal treatment approach.²³

Cancer is in second one among the known causes of death in America. It has been shown that smoking, diet containing high fat and high refined sugar, and lack of physical activity are essential factors stimulating cancer formation by inducing insulin resistance and hyperinsulinemia.²⁴

In scientific studies, it has been proved beneficial effects of regular physical activity on cancer prevention and treatment of cancer patients. It has been stated that three times per week, during 40 minutes of physical activity is well tolerated by patients and increases their life quality during chemotherapy.²⁵ It was investigated the effect of exercise on disease progression and survival time of patients. It was found that rate of disease progression and risk of mortality were significantly lower in individuals doing regular physical activity compared with individuals having a sedentary life.²⁶

In this present study, it has been found that patients applied complementary medicine methods have preferred herbal treatment commonly. Furthermore, some of the patients have applied prayer, music, and massage for psychological support and relaxation. Reasons to apply for complementary medicine methods have been identified as helping the control of disease, believing the beneficial effects of complementary medicine methods and reducing the side effects of conventional cancer treatment.

Reduction of symptoms related to mental and physical stress is a basic goal in chronic diseases and cancer care. In one study, it was investigated the use of body-mind techniques in 2055 American adults. Meditation, dreaming and yoga have been found to be the most widely used techniques.²⁷ It has been found that yoga has useful potential effects as a complementary therapy. Yoga is very effective against depression and is easy to implement. In one study, after yoga lesson, it has been seen improvement in the mood of depressed patients. Yoga has been found to have beneficial effects in terms of emotional, physiological and biological aspects.²⁸

In one study, even low levels of physical activity has been shown to be important providing relief from psychological aspects. In studies conducted recent years to determine the use of complementary/alternative medicine methods of treated cancer patients, it has been found that moderate exercise stimulates natural killer cell activity, reduces sick again, and helps individuals to cope with the disease providing psychological support.²⁹

Conclusion

In this study, it has been found that herbal therapy (phytotherapy) which are classified among the biological treatments have been used commonly as one part of complementary medicine methods. The conventional medicine should be considered primarily deciding to use one of the complementary and alternative medicine methods. CAM components may interact with chemotherapeutic drugs (they may reduce the effects of the drug and / or create toxic effects). At this point patients should consult doctors and dietitians about the use of CAM methods because of the effects of CAM methods on patient's healing process, life quality and most importantly vital organs.

Limitations

The nature of a pilot study imposes numerous limitations, first of which is the small sample size and limited geographic region from which the participants were recruited. Therefore, we were looking forward to repeat of this study with a larger sample size and more diverse geographic regions is needed.

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Potential conflict of interest

No potential conflict of interest relevant to this article was reported.

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