COMPLEMENTARY AND ALTERNATIVE MEDICINE AWARENESS IN CANCER PATIENTS RECEIVING CHEMOTHERAPY

H. İNCI, F. İNCI

[1]Department of Family Medicine, Faculty of Medicine, Karabuk University, Karabuk, Turkey
[2]Department of Internal Medicine and Medical Oncology, Faculty of Medicine, Karabuk University, Karabuk, Turkey

Abstract – Objective: *We aimed at investigating the knowledge and attitudes of cancer patients who underwent chemotherapy about Complementary and Alternative Medicine (CAM).*

Patients and Methods: 306 cancer patients filled the CAM questionnaire. The patients were evaluated in terms of frequency of CAM use and CAM type, source of information, and reason for use and some other factors.

Results: 92.8% of the patients had knowledge about CAM. 63.4% of them used one of the CAM methods. The patients generally used the CAM method thinking it may provide additional benefit to cancer treatments.

Conclusions: It was observed that the rate of CAM use among the cancer patients were high. The patients obtained the information about CAM mostly through the media. Education level, disease stage, and place of residence were the independent predictive factors for the CAM use. They tended to use phytotherapy more often than other applications due to the fact that it has been used in our country for years.

KEYWORDS: *Cancer, Complementary and Alternative Medicine, Phytotherapy.*

INTRODUCTION

Although there are some improvements in the treatment of cancer in recent years, it is known that cancer patients frequently use complementary treatment methods in addition to their medical treatments in order to reduce the symptoms associated with the side effects of medical treatment and strengthen their immune systems[1]. The use of complementary therapy varies by country. Complementary and Alternative Medicine (CAM) involves different practices used in maintaining and improving health, preventing and treating diseases. These practices can be used alone or in combination with traditional medicine approaches. CAM is applied as a primary treatment or in support of medical treatment in various diseases[2]. Acupunc-ture is one of the treatment methods widely used in CAM [3]. It was shown that acupuncture had positive effects on the cancer patients who were receiving chemotherapy and experiencing its side effects such as nausea, vomiting, pain, poor sleep quality and anxiety[4]. Hypnosis may help treat the symptoms of nausea and vomiting in patients with breast cancer, manage pain in a variety of contexts, and also reduce the anxiety level[5]. In a study, ginger was shown to reduce nausea in the acute phase of chemotherapy in patients with breast cancer[6]. Turmeric and curcumin were shown to reduce the erythema intensity in the oral mucosa and reduce pain in patients undergoing chemotherapy and radiotherapy[7]. Cupping therapy reduced the degree of lymphedema and pain in patients with lymphedema due to breast cancer [8]. Although its mechanism

of action has not been fully understood yet, several studies showed the effect of different saffron components on various signal pathways and apoptosis in cells[9]. On the other hand ozone therapy is used effectively in fatigue therapy in cancer patients[10]. In a case study, it was concluded that leech therapy significantly reduces pain in painful carcinomatous ulcer [11]. Apitherapy was shown to help reduce the severity of oral mucositis and improve quality of life in cancer patients undergoing radiation therapy[12].

The use of CAM is on the increase. In the studies conducted in various countries, the frequency of CAM use was reported to be between 7% and 64%[13]. The CAM Practices Regulation was published by the Ministry of Health in our country in 2014. The Ministry of Health has defined 15 CAM applications (Acupuncture, Apitherapy, Phytotherapy, Hypnosis, Leech application, Homeopathy, Cariopractic, Cupping therapy, Maggot application, Mesotherapy, Osteopathy, Ozone therapy, Reflexology and Music therapy)[2].

In this study, we aimed at determining the frequency of use, type, information source, reason of use, perceived benefit and characteristics (gender, cancer type, cancer stage) of the group using CAM applications approved by the Ministry of Health.

PATIENTS AND METHODS

306 cancer patients who underwent chemotherapy between May 2020 and July 2020 at the Medical Oncology Clinic were included in the study. The patients with cognitive impairment preventing them from answering the questions were excluded from the study.

The patients completed the CAM information and attitude questionnaire. They were evaluated in term of frequency of CAM usage, commonly used CAM type, source of information, reason for use, and some other factors. The CAM usage query form was created by making minor adaptations to the one used in a study carried out in the UK[14]. This form was designed in three parts. In the first part, the patients' sociodemographic characteristics, cancer type and stage were recorded. In the second part, the patients were asked which CAM applications they used. To this and, the patients were asked to choose the CAM application they used from a list of 15 most common CAM applications. In the third part, we asked questions only to the patients using CAM. In this section, the following issues were questioned: the reasons for using CAM, whether the physician in charge knows that the patient is using CAM, frequency of use, and sources of information.

The patients meeting the following criteria were included in the study being older than 18 years old, being diagnosed with cancer, and receiving chemotherapy. The patients who did not want to participate in the study and those with missing sociodemographic data were excluded from the study (Figure 1).

STATISTICAL ANALYSIS

IBM SPSS software package (v.22.0; SPSS Inc., Armonk, NY, USA) was used in the statistical data analysis. The descriptive statistics were expressed in number, percentage, and mean ± standard deviation. Kolmogorov Smirnov test was used to determine whether the data was normally distributed. Student's t test was used for the parametric data and Mann Whitney U test for the nonparametric data. The categorical data were compared using chi-square test. Logistic regression analysis was used to determine the independent predictors for CAM use in cancer patients. The statistical significance was set at $p < 0.05$.

The required approval was obtained from the Local Ethics Committee (decision no: 202/14.05.2020) for this study.

RESULTS

Of the 306 patients participating in the study, 45.4% ($n = 139$) were female and 54.6% ($n = 167$) were male. The mean age was $62.8 ± 9.8$ years. 92.8% of the cancer patients had knowledge about CAM practices and 63.4% of them were using CAM. The majority of the patients were non-workers (71.2%), primary school graduates (81.7%), living in a city center (57.5%), non-smokers (72.2%), and non-alcohol users (92.4%). The patients had the following cancer types: breast (33%), colon (26.1%), gastric (18.6%), lung (12.7%), and others (9.4%).

The cancer patients with and without knowledge on CAM and those using and not using CAM were compared in terms of gender, occupation, educational status, place of residence, smoking status, alcohol use, cancer stage and types. There was a statistically significant difference between the patients with and without knowledge on CAM in terms of gender ($p = 0.021$), occupation ($p < 0.001$), educational status ($p = 0.010$), place of residence ($p = 0.032$), and smoking status ($p = 0.005$). There was a statistically significant difference between the patients using and not using CAM in terms of gender ($p = 0.012$), educational status ($p < 0.001$), place of residence ($p =$
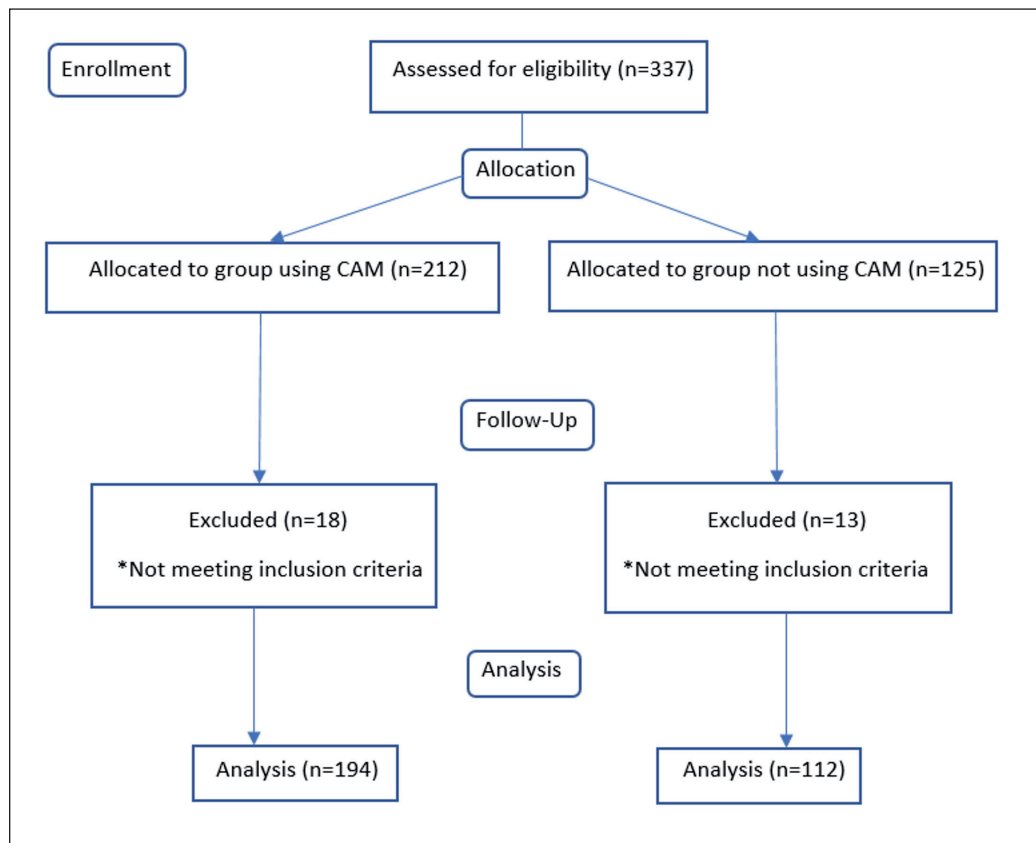
Fig. 1. Flow diagram of the study.

0.009), smoking status ($p = 0.001$), alcohol use ($p = 0.047$), and cancer stage ($p = 0.001$). The patients' knowledge on CAM and their CAM usage status by the sociodemographic characteristics, cancer type and stage are given in Table 1.

The methods that the patients had information about were phytotherapy, cupping therapy, leech application, acupuncture in order of most to least known; whereas those used by the patients were phytotherapy, apitherapy, leech application, acupuncture, cupping therapy, and prolotherapy in order of most to least used. The other methods such as hypnosis, reflexology, ozone therapy, homeopathy, chiropractic, osteopathy, mesotherapy, music therapy, and maggot application were not used by the patients. Phytotherapy, apitherapy, leech application, cupping therapy, apitherapy were generally performed outside a hospital, whereas acupuncture and prolotherapy were performed by a physician in a hospital (Table 2).

The patients who received CAM put forward the following reasons for using it: "considering it useful" (26.8%) and "because the physician recommended it" (23.1%). Turmeric (14.4%) and saffron (11.3%) were the first two most commonly used phytotherapeutics. The most commonly used local phytotherapeutic plant was saffron (11.3%). Black mulberry (1.6%) was found to be a local

herbal treatment plant and the patients learned its use from their elders. They heard about CAM most frequently through media (29.2%), friends (26%), and physicians (15.4%). 39.6% of the patient informed their physicians that they were using CAM (Table 3).

According to logistic regression analysis; the education level (Odds Ratio (OR): 0.207, 95% Confidence Interval (CI): 0.100-0.430, $p < 0.001$), disease stage (OR: 0.105, 95% CI: 0.057-0.193, $p < 0.001$), and place of residence (OR: 2.169, 95% CI: 1.241-3.794, $p = 0.007$) were the independent predictive factors for the CAM use (Table 4).

DISCUSSION

In our study, 63.4% of the cancer patients were using CAM. In a study on 14 European countries, the rate of use of CAM was found to be 36% with a wide distribution between 15% and 73%[15]. In a study conducted in our country, it was found that the rate of the participants who used the CAM methods was 31.5%[1]. In another study conducted on the patients with breast cancer, it was reported that 80% of them used CAM together with chemotherapy, radiotherapy and hormone therapy[16].

TABLE 1. CAM knowledge awareness and CAM usage status according to the sociodemographic characteristics of cancer patients, cancer type and stage.

Variables	All Patients n (%)	CAM Knowledge			CAM Usage		
		Yes n (%)	No n (%)	p	Yes n (%)	No n (%)	p
Gender				0.021			0.012
Female	139 (45.4)	134 (96.4)	5 (3.6)		98 (70.5)	41 (29.5)	
Male	167 (54.6)	150 (89.8)	17 (10.2)		96 (57.5)	71 (42.5)	
Age				0.068			0.217
<50	34 (11.1)	34 (100)	0 (0)		19 (55.9)	15 (44.1)	
>50	272 (88.9)	250 (91.9)	22 (8.1)		175 (64.3)	97 (35.7)	
Occupation				0.000			0.273
Not working	218 (71.2)	196 (89.9)	22 (10.1)		141 (64.7)	77 (35.3)	
Working	88 (28.8)	88 (31.0)	0 (0)		53 (60.2)	35 (39.8)	
Education				0.010			0.000
Primary school	250 (81.7)	228 (91.2)	22 (8.8)		172 (68.8)	78 (31.2)	
High school	56 (18.3)	56 (100)	0 (0)		22 (39.3)	34 (60.7)	
Residence				0.032			0.009
Town	130 (42.5)	116 (89.2)	14 (10.8)		72 (55.4)	58 (44.6)	
City center	176 (57.5)	168 (95.5)	8 (4.5)		122 (69.3)	54 (30.7)	
Smoking				0.005			0.001
Yes	85 (27.8)	73 (85.9)	12 (14.1)		41 (48.2)	44 (51.8)	
No	221 (72.2)	211 (95.5)	10 (4.5)		153 (69.2)	68 (30.8)	
Alcohol Use				0.271			0.047
Yes	17 (5.6)	17 (100)	0 (0)		7 (41.2)	10 (58.8)	
No	289 (94.4)	267 (92.4)	22 (7.6)		187 (64.7)	102 (35.3)	
Cancer Type				0.078			0.136
Gastric	57 (18.6)	52 (91.2)	5 (8.8)		42 (73.7)	15 (26.3)	
Breast	101 (33.0)	98 (97.0)	3 (3.0)		62 (61.4)	39 (38.6)	
Colon	80 (26.1)	73 (91.3)	7 (8.8)		50 (62.5)	30 (37.5)	
Lungs	39 (12.7)	37 (94.9)	2 (5.1)		19 (48.7)	20 (51.3)	
Other	29 (9.4)	24 (82.7)	5 (17.3)		21 (72.4)	8 (27.6)	
Cancer Stage				0.294			0.000
Early	143 (47.6)	131 (91.6)	12 (8.4)		124 (86.7)	19 (13.3)	
Advanced	163 (53.3)	153 (93.9)	10 (6.1)		70 (42.9)	93 (57.1)	
Total	306 (100)	284 (92.8)	22 (7.2)		194 (63.4)	112 (36.6)	

p-value, Chi square test; n, number; CAM, Complementary and Alternative Medicine.

In our study, it was seen that female patients, non-worker patients, non-university graduate patients, non-smokers patients, and those living in a city center had more knowledge about CAM. It was observed that the use of CAM was significantly higher in the non-university graduate patients, female patients, non-smoker patients, non-alcohol user patients, those at the early stage of cancer, and those living in a city center. In cancer patients, the decrease in education level may create more desire to use complementary therapies due to being affected more by the social environment and media. In other studies, it was reported that the use of CAM increased depending on some factors such as gender (women use more than men), socio-economic level, and education level[17-19]. There was no difference between the age groups in terms of CAM use. It was seen that the female patients used CAM statistically significantly more than the males (*p* = 0.012). It was observed that the patients residing in the city centers used CAM applications more than those residing in the towns (*p* = 0.009). In a study, it was found that the use of CAM in the patients living in city centers was higher than those living in rural areas [1]. According to logistic regression analysis; the education level (OR: 0.207, 95% CI: 0.100-0.430 *p* < 0.001), disease stage (OR: 0.105, 95% CI: 0.057-0.193, *p* < 0.001) and place of residence (OR: 2.169, 95% CI: 1.241-3.794, *p* = 0.007) were the independent predictive factors for the CAM use. In our study, there was no difference between the patients in terms of age, occupation, and cancer type. The methods frequently used by the cancer patients were phytotherapy, apitherapy, leech application, acupuncture, cupping therapy, and

TABLE 2. CAM knowledge awareness and CAM usage status of cancer patients according to CAM methods.

CAM method	CAM knowledge awareness n (%)		CAM usage status n (%)		
	I do not know	I know	I did not use	In the hospital	Out of the hospital
Acupuncture	127 (41.5)	179 (58.4)	299 (97.7)	7 (6.3)	0 (0)
Hypnosis	243 (79.4)	63 (20.5)	306 (100)	0 (0)	0 (0)
Phytotherapy	15 (4.9)	291 (95.0)	180 (58.8)	28 (9.2)	98 (32.0)
Leech application	22 (7.2)	284 (92.8)	294 (96.1)	0 (0)	12 (3.9)
Cupping therapy	18 (5.9)	288 (94.1)	301 (98.4)	0 (0)	5 (1.6)
Reflexology	301 (98.4)	5 (1.6)	306 (100)	0 (0)	0 (0)
Ozone therapy	285 (93.1)	21 (6.9)	306 (100)	0 (0)	0 (0)
Homeopathy	306 (100)	0 (0)	306 (100)	0 (0)	0 (0)
Chiropractic	306 (100)	0 (0)	306 (100)	0 (0)	0 (0)
Osteopathy	306 (100)	0 (0)	306 (100)	0 (0)	0 (0)
Mesotherapy	280 (91.5)	26 (8.5)	306 (100)	0 (0)	0 (0)
Apitherapy	206 (67.3)	100 (32.7)	284 (92.8)	5 (1.6)	17 (5.6)
Music therapy	277 (90.5)	29 (9.5)	306 (100)	0 (0)	0 (0)
Prolotherapy	302 (98.7)	4 (1.3)	302 (98.7)	4 (1.3)	0 (0)
Maggot application	282 (92.2)	24 (7.8)	306 (100)	0 (0)	0 (0)

n, Number; CAM, Complementary and Alternative Medicine.

prolotherapy in order of most to least used. These methods can be considered to be more known, accessible, and low cost. Phytotherapy, apitherapy, leech application, and cupping therapy were generally performed outside the hospital. Acupuncture was performed by a physician in a hospital.

In our study, turmeric and saffron were the most frequently used phytotherapeutics. Saffron was the most commonly used plant for the patients. Saffron is grown in the region where our study was conducted. Therefore, it was used more than other phytotherapeutics. The herbal methods found to be used by the patients in our study were similar to those found in various studies on the use of CAM in our country[16]. On the other hand, a study reported that the most commonly used plant was "nettle grass"[20]. In our study, it was found that black mulberry was being used by the patients as a local herbal treatment plant, and they learned its use from their elders. Black mulberry is often grown in our region.

The patients obtained the information about CAM mostly through the media and friends. This shows the effective power of mass media and social environment. In the previous studies, it was reported that people had the information about CAM through their friends, print media, and the internet[20]. In a study, it was observed that the vast majority of the patients applied these methods upon the recommendation of a family member, friend or another patient in the clinic[17-19].

In our study, the cancer patients used CAM mostly because "they thought it was useful". In the studies investigating the reasons for using CAM, it was determined that the majority of patients used CAM methods "because they believed that they would benefit from cancer treatment and these methods"[17-19]. In some studies, it was reported that patients used CAM just for "having done everything against cancer"[21-23]. In some previous studies, it was reported that the majority of patients and their relatives using CAM did not inform the healthcare personnel about this[17,19]. Sometimes patients may not notify healthcare professionals about their CAM practices for various reasons (physician disapproval, hesitation, physician not asking, etc.).

In our study, it was found that the frequency of applying CAM methods increased at early stage of cancers. This can be explained by the fact that after the diagnosis, the majority of patients are affected by the internet, the media or the people around them in their search for information about their diseases.

Our patients had not heard about and used Reflexology, Ozone therapy, Homeopathy, Chiropractic, Osteopathy, Mesotherapy, Maggot application, and Music therapy. In Turkey, CAM practices have been being handled by the Ministry of Health in recent years, which has provided CAM trainings to the healthcare personnel and increased the level of access of patients to these practices in public hospitals and private clinics. Therefore, most of the patients may not have used CAM because they do not have sufficient information about the content of these applications.

TABLE 3. Cancer patients' views on CAM practices.

Cancer patients' views on CAM practices		n (%)
Do you use CAM methods?	Usage	194 (100)
What is the reason if you use it?	I think it's useful	52 (26.8)
	It feels good	20 (12.3)
	Less side effects	24 (7.8)
	Increases body defense	27 (13.9)
	Because the physician recommended	45 (23.1)
	Other (curiosity, psychological relaxation, etc.)	25 (12.8)
Do you use herbal supplements	Usage	194 (100)
or food supplements?	Love-in-a-mist	10 (5.1)
What are their names if you use them?	Hibiscus	5 (2.5)
	Nettle	8 (4.1)
	Black mulberry	4 (2.0)
	Black grape seed	5 (2.5)
	Saffron	22 (11.3)
	St. John's Wort	10 (5.1)
	Garlic	13 (6.7)
	Grape molasses	13 (6.7)
	Ginger	8 (4.1)
	Turmeric	28 (14.4)
Is there any plant that you know is used	All patients	306 (100)
in your region even if you do not use it?	I have no knowledge	270 (88.2)
	Love-in-a-mist	5 (1.6)
	Nettle	8 (2.6)
	Carob	3 (1.0)
	Rosehip	4 (1.3)
	Saffron	16 (5.2)
Are there any local and herbal	All patients	306 (100)
treatment methods you learned	I have no knowledge	301 (98.4)
from your elders?	Black mulberry	5 (1.6)
Where did you get the information	I have knowledge	284 (100)
about CAM?	Friend	74 (26.0)
	Family	36 (12.6)
	Physician	44 (15.4)
	Non-physician health personnel	11 (3.8)
	Media	83 (29.2)
	Internet	21 (7.3)
	Other	15 (5.2)
Did you notify the health personnel	Usage	194 (100)
of the CAM method you used?	Yes	77 (39.6)
	No	117 (60.3)

n, Number; CAM, Complementary and Alternative Medicine.

The limitation of our study is that it was performed in a single center. It covers only the CAM knowledge and attitudes of the patients living in one region. It may not fully reflect the characteristics of Turkey in this regard.

CONCLUSIONS

In this study, it was observed that the rate of CAM use among the cancer patients was high. The cancer patients generally preferred phytotherapy, acupuncture, and apitherapy. Education level, disease stage, and place of residence were the independent predictive factors for CAM use.

TABLE 4. Logistic regression analysis for the independent predictive factors of using CAM.

Variables	OR	95% CI	p
Residence		1.241-3.794	0.007
Town	1		
City Center	2.169		
Education		0.100-0.430	0.000
Primary school	1		
High school	0.207		
Cancer Stage		0.057-0.193	0.000
Advanced	1		
Early	0.105		

p-value, Logistic regression test, education, cancer stage, residence was included in this regression analysis, OR: Odds Ratio, CI: Confidence Interval.

It was observed that turmeric and saffron were the most frequently used phytotherapeutics. The patients obtained the information about CAM mostly through the media. The patients had the CAM applications mostly outside the hospital and it was seen that they did not inform their physicians about using these applications. In our country, some of the CAM applications such as phytotherapy, leech application, cupping therapy, and apitherapy have been known and used against various diseases for many years. Therefore, the patients in this study tended to use these applications more frequently than others.

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The authors declare no conflicts of interest.

REFERENCES

1. Karakoç MD. Onkoloji hastalarının tamamlayıcı ve alternatif tedavi yöntemlerini kullanma durumları. Pamukkale Med J 2020; 13: 69-80.
2. Şahin S. Geleneksel, tamamlayıcı, alternatif tıp uygulamalarına genel bir bakış. Turkish J Fam Pract 2017; 21: 159-162.
3. Zhang XC Chen H, Xu WT, Song YY, Gu YY, Ni GX. Acupuncture therapy for fibromyalgia: a systematic review and meta-analysis of randomized controlled trials. J Pain Res 2019; 12: 527-542.
4. Tas D, Uncu D, Sendur MA, Koca N, Zengin N. Acupuncture as a complementary treatment for cancer patients receiving chemotherapy. Asian Pac J Cancer Prev 2014; 15: 3139-3144.
5. Carlson LE, Toivonen K, Flynn M, Deleemans J, Piedalue KA, Tolsdorf E, Subnis U. The Role of Hypnosis in Cancer Care. Curr Oncol Rep 2018; 20: 93.
6. Saneei Totmaj A, Emamat H, Jarrahi F, Zarrati M. The effect of ginger (Zingiber officinale) on chemotherapy-induced nausea and vomiting in breast cancer patients: a systematic literature review of randomized controlled trials. Phytother Res 2019; 33: 1957-1965.
7. Normando AGC, de Menêses AG, de Toledo IP, Borges GA, Lima CL, Reis PEDD, Guerra ENS. Effects of turmeric and curcumin on oral mucositis: a systematic review. Phytotherapy Res 2019; 33: 1318-1329.
8. Wang C, Zhang Y, Yang M, Liu Y, Zhu Y, Fan Y, Li Q, Pei X . Bloodletting puncture and cupping as an adjuvant therapy for breast cancer-related lymphedema in female adults: a non-randomized controlled pragmatic trial. J Tradit Chin Med Sciences 2018; 5: 255-263.
9. Patel S, Sarwat M, Khan TH. Mechanism behind the anti-tumour potential of saffron (Crocus sativus L.): the molecular perspective. Crit Rev Oncol/Hematol 2017; 115: 27-35.
10. Tirelli U, Cirrito C, Pavanello M, Del Pup L, Lleshi A, Berretta M. Oxygen-ozone therapy as support and palliative therapy in 50 cancer patients with fatigue-A short report. Eur Rev Med Pharmacol Sci 2018; 22: 8030-8033.
11. Gunarathna E, Singh O, Kulathunga R. Effect of leech therapy (jalaukavacharana) on ulcerative squamous cell carcinoma-A rare case study. Inter J AYUSH Case Rep 2019; 3: 218-223.
12. Mathew J, Doss JJK, Gohil D, Gohil D. A study to evaluate the effectiveness of apitherapy on oral mucositis among cancer patient undergoing radiation therapy in selected hospital Rajkot. Int Journal Nurs Educ Res 2017; 5: 55-58.
13. Ernst E. The prevalence of complementary/alternative medicine in cancer: a systematic review. Cancer 1998; 83: 777-782.
14. Lambert TD, Morrison KE, Edwards J, Clarke C. The use of complementary and alternative medicine by patients attending a UK headache clinic. Complement Ther Med 2010; 18: 128-134.
15. Molassiotis A, Fernández-Ortega P, Pud D, Ozden G, Scott JA, Panteli V, Margulies A, Browall M, Magri M, Selvekerova S, Madsen E, Milovics L, Bruyns I, Gudmundsdottir G, Hummerston S, Ahmad AM, Platin N, Kearney N, Patiraki E. Use of complementary and alternative medicine in cancer patients: a European survey. Ann Oncol 2005; 16: 655-663.
16. Yavuz M, İlçe Aö, Kaymakçi Ş, Bildik G, Diramali A. Meme kanserli hastaların tamamlayıcı ve alternatif tedavi yöntemlerini kullanma durumlarının incelenmesi. Turkiye Klinikleri J Med Sci 2007; 27: 680-686.
17. Kav S, Hanoğlu Z, Algier L. Türkiyede Kanserli Hastalarda Tamamlayıcı ve Alternatif Tedavi Yöntemlerinin Kullanımı: Literatür Taraması. Int J Hematol Oncol 2008; 18: 32-38
18. Yildirim Y, Tinar S, Yorgun S, Toz E, Kaya B, Sonmez S, Balsak D. The use of complementary and alternative medicine (CAM) therapies by Turkish women with gynecological cancer. Eur J Gynaecol Oncol 2006; 27: 81-85.
19. Mazicioglu MM, Serin M, Sahan H. Attitude of patients with gynaecologic malignancies in selecting alternative and complementary therapies. MEJFM 2006; 14: 12-15.
20. Eisenberg DM. The Institute of Medicine report on complementary and alternative medicine in the United States-personal reflections on its content and implications. Altern Ther Health Med 2005; 11: 10-15
21. Carlson CS, Eberle MA, Rieder MJ, Yi Q, Kruglyak L, Nickerson DA. Selecting a maximally informative set of single-nucleotide polymorphisms for association analyses using linkage disequilibrium. Am J Hum Genet 2004; 74: 106-120.
22. Öztürk R, Şatır D, Sevil Ü. Jinekolojik kanserli hastaların tamamlayıcı ve alternatif tedavi kullanım durumları ve tutumlarının incelenmesi. Gaziantep Med J 2016; 22: 141-147.
23. Tas F, Ustuner Z, Can G, Eralp Y, Camlica H, Basaran M, Karagol H, Sakar B, Disci R, Topuz E. The prevalence and determinants of the use of complementary and alternative medicine in adult Turkish cancer patients. Acta Oncol 2005; 44: 161-167.