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Complementary and Alternative Medicine Use in Lung Cancer Patients and Its Impact on the Quality of Life

Akciğer Kanseri Hastalarında Tamamlayıcı ve Alternatif Tedavi Kullanımı ve Yaşam Kalitesi Üstüne Etkileri

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ABSTRACT

AIM: *In this study we aimed to provide data about the rate of complementary and alternative medicine use among lung cancer patients and the effect of the intervention on the quality of life.*

METHODS: *The study population consisted of patients visited the oncology outpatient clinic of Yedikule Chest Diseases Training and Research Hospital to receive ambulatory chemotherapy between December 2011 and March 2012 (N=200). Data was collected using the Personal Information Form, the Complementary and Alternative Medicine Approaches Scale and the Nightingale Symptom Assessment Scale. The data obtained from the patients using complementary and alternative medicine was compared with others using Independent Sample T Test, Mann-Whitney U and the Chi-square Test.*

RESULTS: *The mean age of participants was 59.97±8.41 (min28-max84) and 81% of them were male. Complementary and alternative medicine was used by 56.5% of the patients. The most preferred Cognitive-Behavioural Therapy and Manipulative Approaches were praying (89%), performing salat (95%), laughing (82%), visiting a neighbour (78%) and dancing (54%). The most preferred herbal approaches were linden tea (81%), green tea(74%), thyme(70%), sage (67%), and grape seed crust(67%). Most used nutritional approaches were fruits-vegetables-fish-chicken-yogurt (100%), carrots (98%), garlic (97%), pomegranat(93%), meat (92%), pastry and milky desserts (91%). The rationale for using complementary and alternative medicine were feeling psychologically relaxed (81%) and believing that they would increase the effect of treatment (65%).*

CONCLUSION: *Complementary and alternative medicine use is very common among lung cancer patients in Turkey and it seems that the practice increases the quality of life of the patients.*

Key words: *alternative medicine; complementary therapies; lung neoplasms; quality of life*

ÖZET

AMAÇ: *Bu çalışmada akciğer kanseri olan hastalarda tamamlayıcı ve alternatif tıp kullanımı üzerine veri sağlamayı ve bunun yaşam kalitesi üzerine etkilerini araştırmayı amaçladık.*

YÖNTEM: *Çalışma evreni Yedikule Eğitim ve Araştırma Hastanesi Onkoloji Polikliniğine, Aralık 2011 ve Mart 2012 arasında kemoterapi almak için başvuran hastalardan oluştu (N=200). Veriler bireysel bilgi formu, tamamlayıcı ve alternatif tıp yaklaşım skalası ve Nightingale belirti belirleme skalası kullanılarak toplandı. Tamamlayıcı ve alternatif tıp yaklaşım kullanan katılımcılar ile kullanmayanların verileri bağımsız değişkenler T testi, Mann-Whitney U testi, ve ki kare testi kullanılarak karşılaştırıldı.*

BULGULAR: *Çalışmaya katılanların yaş ortalaması 59,97±8,41 yıldı (min 28-max 84) ve %81'i erkekti. Tamamlayıcı ve alternatif tıp %56,5 hasta tarafından kullanılıyordu. Bilişsel-Davranışsal Terapiler ve Manipulatif Yaklaşımlardan en fazla dua etme (%95), namaz kılma (%89), gülme (%82), komşuya gitme (%78) dans etme (%54) tercih ediliyordu. Bitkisel yaklaşımlardan; ıhlamur çayı (%81), yeşilçay (%74), kekik (%70), adaçayı (%67), üzüm çekirdeği kabuğu (%67); besinsel yaklaşımlardan meyve-sebze-balık-tavuk-yoğurt (%100), havuç (%98), sarımsak (%97), nar (%93), hamur ve sütlü tatlı (%91), kırmızı et (%92) tercih ediliyordu. Kullanma nedenleri, psikolojik olarak rahatlamak (%81) ve tedavinin etkisini arttırdığını düşünmek (%65) olduğu görüldü. Tamamlayıcı ve alternatif tedavi kullanma sebepleri içerisinde en sık sebep psikolojik rahatlama (%81) ve tedavi etkinliğini artırmaktı (%65).*

SONUÇ: *Türkiye'de akciğer kanseri olan bireyler arasında tamamlayıcı ve alternatif tıp kullanımı oldukça yaygındır ve uygulama ile yaşam kalitesi artıyor gibi gözükmektedir.*

Anahtar kelimeler: *alternatif tıp; tamamlayıcı tıp; akciğer kanseri; yaşam kalitesi*

Introduction

Lung cancer is one of the most important diseases of the respiratory system. Although it was a rare disease at the beginning of the 20th century, cigarette smoking increased its incidence and it has become the most common cancer in the world.

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Lung cancer negatively affects the bio-physiological, psychological and socio-cultural aspects of an individual's life. The disease is mostly diagnosed at advanced stages and chemotherapy is frequently used in the treatment. In patients treated with chemotherapy, the quality of life is disrupted and the patients often need to use complementary and alternative treatments (CAM)[1,2].

CAM are health care products and procedures that have not been considered as the components of conventional medicine, yet. Complementary treatments are used to support scientific medicine. They are commonly used to improve the quality of life, to decrease the symptoms and side effects of medicine and to provide physical and psychological support. Alternative treatments are performed instead of medical treatment and their effects are not scientifically proven[1,2].

Nowadays the frequency of CAM use is gradually increasing both in the general population and also among cancer patients. This is because CAM resolves the symptoms of cancer and the side effects of treatment, supports the immune system and increases the quality of life. Patients experience methods like herbal mixtures, vitamins, antioxidants, yoga, meditation, bio-energy, acupuncture, aromatherapy or religious practices[3].

The use of CAM differs according to the geographic location of the country, ethnicity, education, socio-economic factors and religious beliefs. The most commonly used CAM methods in western countries are multivitamins, meditation, hypnotherapy, relaxation exercises and aromatherapy; and in eastern countries herbal mixtures are more common. In the study conducted by Akyürek et al. 58.5% of the patients used herbal mixtures consisting of stinging nettles and its seeds. Many of the patients ignore to inform the health care providers about the use of CAM. Patients must be interrogated about the use of CAM[3,4].

Although there a few studies dealing with CAM use, the issue has not been studied well in our country [1,3,5-9]. In this study we aimed to provide data about the rate of CAM use among lung cancer patients and the effect of the intervention on the quality of life.

Methods

This study was planned as a definitive study to identify the frequency of the use of complementary and alternative treatment in individuals with lung cancer and its association with the quality of life. The study questions are:

- What are the CAM use approaches and reasons of use in individuals with lung cancer?
- Does CAM use improve quality of life?

Settings and Patients

The population of the study consists of patients that applied to the Oncology Department of Yedikule Chest Diseases Training and Research Hospital for ambulatory chemotherapy between December 2011 and March 2012 (N=200).

The inclusion criteria were: being 18 years of age or older, not being in the terminal stage, being open to communication and collaboration, being diagnosed with cancer at least two months ago and being treated with chemotherapy and/or radiotherapy.

Data Collection Tools

The data was collected using the Personal Information Form that covered the socio-demographic characteristics of the individuals, the Complementary and Alternative Medicine Approach Scale and the Nightingale Symptom Evaluation Scale.

Personal Information Form

It included questions about the individual's socio-demographic characteristics, the diseases and the use of complementary and alternative treatments.

Complementary and Alternative Medicine Approach Scale (CAMAS)

It was developed by Can et al. (2009) with the purpose of identifying the complementary and alternative treatment use approaches and reasons of people with cancer. The scale consists of 55 topics and three sub-groups. The sub-groups contain cognitive, behavioural and manipulative; herbal and nutritional interventions. The scale points can be calculated by giving "0" points if the patient does not use or perform interventions (never or stopped) and "1" point for using and performing interventions (sometimes, often, all the time, I started, I decreased, I increased, I continued just the same). The Cronbach Alpha coefficient was calculated as 0.80 for herbal approaches, 0.85 for the nutritional approach, 0.49 for the cognitive-behavioural and manipulative approach and 0.85 for the entire scale[7].

Nightingale Symptom Assessment Evaluation Scale (N-SAS)

It is a quality of life scale developed in 2009 for cancer patients by Can and Aydıner. The scale consists of 38 items and three sub-scales: physical wellbeing, social wellbeing and psychological wellbeing. This Likert type scale is scored by giving "0" points for the answer 'no', "1" for the answer 'a little', "2" for 'not much', "3" for 'a lot' and "4" for 'too much'. High scores indicate that patients are affected highly by the problems caused by the disease/treatment and that the general quality of life is poor. Quality of life is determined as "very good" if the scores are between 0-0.50, "good" if the scores are between 0.51-1.50, "moderate" if the scores are between 1.51-2.50, "poor" if the scores are between 2.51-3.50 and "very poor" if the scores are between 3.51-4.00. In a study conducted by Can (2008) the validity and credibility of the N-SAS was tested and the Cronbach Alpha coefficient was identified between 0.81-0.87[7].

Ethical Considerations

Before the study was started written permission was obtained from the Yedikule Chest Diseases and Surgery Training and Research Hospital and the Health Directorate of Istanbul. The individuals comprising the study sample were explained the purpose of the study and what was expected of them, and informed consent was obtained in accordance with principles of willingness and volunteering to participate in the study.

The Limitations of the Study

The study sample included patients applying to one hospital only. Thus, the results of this study cannot be generalized.

The Evaluation of the Data

The SPSS for Windows 21.0 package program was used for the statistical analyses of the data obtained in the study. To evaluate the study data, definitive statistical methods (rate, mean, standard deviation, and frequency values) were used. To evaluate the quantitative data the independent sample t-test and the Mann-Whitney U tests were used. The chi-square test was used in the analyses of qualitative data. Distribution of the variables was checked using the Kolmogorov-Smirnov test. The significance of the p value was accepted <0.05.

Results

The mean age of the individuals included in the study was 59.97±8.41 (min 28-max 84). A total of 113 (56.5%) participants used CAM. Demographic data of the participants and CAM use ratios were summarized in Table 1 and 2. Younger, married and unemployed patients were frequently the CAM users (p>0.05). Gender, education, profession, income, chronic diseases and chemotherapy did not affect the CAM use rates. Family history of tumours, undergoing radiotherapy and surgery lowered CAM use ratio (p<0.05).

As cognitive-behavioural therapies and manipulative approaches, the participants mostly preferred praying (95%), performing the five daily prayers (89%) (namaz/salat) and laughing (82%). Among herbal approaches the most common choices were linden tea (81%), green tea (74%) and thyme (70%). The most common nutritional supplements were fruits (100%), vegetables (100%) and fish (100%). Table 3 summarized the CAM types used by the participants.

The rationale to use cognitive-behavioural therapies and manipulative approaches were mostly psychological relief (81%, n=91), praying (79%, n=89) and not leaving any methods untried (5%, n=6). The rationale of using herbal approaches were to increase the efficacy of treatment (65%, n=47), to increase blood values (61%, n=69), to strengthen the immune system (42%, n=47) and not to leave any methods untried (5%, n=6). The rationale of using nutritional approaches were to increase the efficacy of treatment (77%, n=87), to prevent the progression of the diseases (45%, n=51), to strengthen the immune system (35%, n=39) and to increase the appetite (7%, n=8). The rationales of CAM use was summarized in Table 4.

The Nightingale Symptom Assessment Scale total mean scores were 2.51 ± 0.96 (poor) in all individuals, 1.91±0.61 (moderate) in CAM users and 3.25±0.72 (poor) in non-CAM users. Among the subscales of the Nightingale Symptom Assessment Scale the mean physical wellbeing scores were 2.44±0.93 (moderate) in all individuals, 1.93±0.73 (moderate) in CAM users and 3.12±0.71 (poor) in non-CAM users.

Social wellbeing scores were 1.82±1.34 (moderate) in all individuals, 1.14±0.83 (good) in CAM users and 2.83±1.14 (poor) in non-CAM users, the psychological wellbeing mean scores were 3.24±0.72 (poor) in all individuals, 2.85±0.65 (poor) in CAM users and

3.74±0.58 (very poor) in non-CAM users. The total mean Nightingale Symptom Assessment Scale scores of CAM users (Z=-10.05, p<0.001) and the physical wellbeing (Z=-9.52, p<0.001), social wellbeing (Z=-9.49 p<0.001) and psychological wellbeing (Z=-8.56 p<0.001) mean subscale scores were statistically significantly lower that the mean scores of non-CAM users (Table 5).

Table 1. *Demographic characteristics of lung cancer patients and the effect of complementary and alternative medicine use*

CAM use		**Yes (n=113)**	**No (n=87)**	**Total**		
N=200		n (%)	n (%)	n (%)	**X² / t**	**P value**
Age	18-60	70 (54.3)	36 (45.7)	106 (53.0)	t=-4.04	<0.001
	>60	43 (45.7)	51 (54.3)	94 (47.0)		
Gender	Male	95 (58.6)	67 (41.4)	162 (81.0)	x²=1.59	0.207
	Female	18 (47.4)	20 (52.6)	38 (19.0)		
Marital status	Married	111 (59.4)	76 (40.6)	187 (93.5)	x²=9.56	0.002
	Single	2 (15.4)	11 (84.6)	13 (6.5)		
Education	Illiterate	9 (39.1)	14 (60.9)	23 (11.5)	x²=5.85	0.211
	Primary school	65 (57.0)	49 (43.0)	114 (57.0)		
	Middle school	17 (73.9)	6 (26.1)	23 (11.5)		
	High school	16 (53.3)	14 (46.7)	30 (15.0)		
	University	6 (60.0)	4 (40.0)	10 (5.0)		
Occupation	Housewife	13 (43.3)	17 (56.7)	30 (15.0)	x²=9.39	0.052
	Worker	15 (88.2)	2 (11.8)	17 (8.0)		
	Government employee	4 (50.0)	4 (50.0)	8 (4.0)		
	Self-employment	25 (56.8)	19 (43.2)	44 (22.0)		
	Retired	53 (54.1)	45 (45.9)	98 (49.0)		
	Other	3 (100)	0 (0.0)	3 (1.5)		
Income level	Ends Meet	69 (53.5)	60 (46.5)	129 (64.5)	x²=1.34	0.247
	Ends don't meet	44 (62.0)	27 (38.0)	71 (35.5)		
Employment status	Employed	15 (93.8)	1 (6.3)	16 (8.0)	x²=9.82	0.002
	Not employed	98 (53.3)	86 (46.7)	184 (92.0)		
Health insurance	Insured	111 (56.6)	85 (43.4)	196 (98.0)	x²=0.07	1.000
	Uninsured	2 (50.0)	2 (50.0)	4 (2.0)		

x² Chi Square test / t Independent samples t test, CAM: complementary and alternative medicine

Table 2. *The relation between some characteristics of lung cancer patients and complementary and alternative medicine use*

CAM use		**Yes (n=113)**	**No (n=87)**	**Total**		
N=200		n (%)	n (%)	n (%)	**X² / t**	**P value**
Chronic Disease	Healty	78 (57.4)	58 (42.6)	136 (68.0)	0.13	0.723
	Hypertension	17 (58.6)	12 (41.4)	29 (14.5)		
	Diabetes Mellitus	13 (50.0)	13 (50.0)	26 (13.0)		
	Benign Prostate Hyperplasia	1 (20.0)	4 (80.0)	5 (2.5)		
	Heart Failure	4 (100)	0 (0.0)	4 (2.0)		
Cancer in family members	Yes	15 (34.9)	28 (65.1)	43 (21.5)	10.41	0.001
	No	98 (62.4)	59 (37.6)	157 (78.5)		
Surgical therapy	Yes	18 (35.3)	33 (64.7)	51 (25.5)	12.53	<0.001
	No	95 (63.8)	54 (36.2)	149 (74.5)		
Radiation therapy	Yes	54 (43.9)	69 (56.1)	123 (61.5)	20.63	<0.001
	No	59 (76.6)	18 (23.4)	77 (38.5)		
Chemotherapy	Yes	112 (56.3)	87 (43.7)	199 (99.5)	0.77	1.000
	No	1 (100)	0 (0.0)	1 (0.5)		

x² Chi Square test / t Independent samples t test, CAM: complementary and alternative medicine

Table 3. *Complementary and alternative medicine types used by lung cancer patients (N=113)*

Cognitive-Behavioral Manipulative Supplements		**Herbal Supplements**		**Dietary Supplements**	
	n (%)		n (%)		n (%)
Pray	107 (95)	Linden tea	91 (81)	Fruits	113 (100)
Namaz	100 (89)	Green tea	85 (74)	Vegetables	113 (100)
Laugh	93 (82)	Thyme	79 (70)	Fish	113 (100)
Visit the neighbors	88 (78)	Sage tea	75 (67)	Yogurt	113 (100)
Dancing	61 (54)	Grape seed and peel	75 (67)	Chicken	113 (100)
Massage	53 (36)	Rosehip tea	49 (44)	Carrot	111 (98)
Being prayed by hodja	39 (33)	Ginger	48 (43)	Garlic	109 (97)
Visit place where holy man is buried	21 (19)	Nigella sativa	48 (43)	Pomegranate	106 (93)
Exercise	17 (16)	Vitamin	47 (42)	Meat	104 (92)
Lead	12 (11)	Grape seed extract	37 (33)	Sweet	102 (91)
Carry written Amulet	9 (8)	Linseed	36 (32)	Milk and milk products	101 (89)
Foot massage	9 (8)	Turmeric	32 (28)	Bread/pastry	91 (81)
Take a vow	9 (8)	Bee polen	32 (28)	Honey	88 (79)
Paint	8 (7)	Blueberries	31 (27)	Boiled mulberry juice	76 (67)
Cup pulling	3 (3)	Stinging nettle	30 (26)	Boiled harnup juice	40 (35)
Acupressure	2 (2)	Chmomile	16 (15)	Chestnut honey	21 (19)
Meditation	2 (2)	Almond	13 (12)	Anzer honey	19 (17)
		Ginseng panex	6 (5)	Pomegranate juice	19 (17)
		Hypericum perforatum	3 (3)		

Table 4. *Rationale for complementary and alternative medicine use among lung cancer patients (N=113)*

	N (%)
Cognitive-Behavioral Manipulative Supplement	
To feel better emotionally	91 (81)
Religious practices	89 (79)
Feeling hopeless and seek help	6 (5)
Herbal Supplement Subgroup	
To increase the effect of therapy	74 (65)
To raise blood values	69 (61)
To strengthen the immune system	47 (42)
Feeling hopeless and seek help	6 (5)
Dietary Supplement Subgroup	
To increase the effect of therapy	87 (77)
To stop the progression of the disease	51 (45)
To strengthen the immune system	39 (35)
To increase the appetite	8 (7)

Discussion

The use of CAM in cancer is gradually increasing and its frequency has been reported between 7% and 64% (average of 31.4%)[10]. In a study conducted in 14 European countries including Turkey, it was reported that the use of CAM was 36% in patients with cancer and it was used in a very wide range between 15%-73%[11]. Kav et al. have reviewed the studies carried out in Turkey between 1999-2007 and have reported that the main frequency of CAM use was 46.2% and ranged between 22.1% and 84.1%.[6] Çetin, Kurt, Erbaycu et al. and Can et al reported that 60%, 48.8%, 78.6% and 71.5% of the patients use alternative treatment at least once after being diagnosed[7,9,12,13]. Similarly, 56.5% (n=33) of the patients in our study were also using CAM. It can be

Table 5. *Comparison of the quality of life of lung cancer patients (N=200)**

	Complementary and alternative medicine users and non-users				
	Users (n=113)	Non-users (n=87)	Total		
	Mean ± SD (Median)	Mean ± SD (Median)	Mean ± SD	Z	P
Total score	1.91±0.61 (0.82)	3.25±0.72 (0.80)	2.51±0.96	10.05	<0.001
Physical Wellbeing	1.93±0.73 (0.80)	3.12±0.71 (1.01)	2.44±0.93	-9.52	<0.001
Social Wellbeing	1.14±0.83 (0.90)	2.83±1.14 (0.99)	1.82±1.34	-9.49	<0.001
Psychological Wellbeing	2.85±0.65 (1.31)	3.74±0.58 (0.66)	3.24±0.75	-8.56	<0.001

*Nightingale Symptom Assessment Scale, z Mann-whitney u test

expressed that this rate is rather high when compared to other countries.

The incidence of lung cancer increases with age due to various factors[2,3]. In our study the mean age of the patients was 59.97±8.41 (min 28-max 84) and CAM use was significantly higher in individuals aged between 18 and 60 than in the individuals over 61 (t=-4.04, p<0.001). It was thought that use of social media more frequently by young individuals influenced the result.

Lung cancer is seen more often in smoking and hard working men[7,9,14]. In our study 81% of the individuals were male, and CAM use was more frequent in males. Similarly Erbaycu et al., Algıer et al., Akyürek et al. and Araz et al. have reported that CAM use was more frequent in male patients[3,9,15,16].

Our study contained mostly the unemployed males (92%) and CAM use was significantly higher in unemployed patients (p<0.05). This result resembles the results obtained by Akyürek et. al, Can et al., Erbaycu et al., Güngörmüş and Çetin et al. [3,7,9,12,17]. The frequent use of CAM in these aforementioned groups may be related to the will to reach results in shorter durations, the fact that this group is more susceptible to environmental influence and the increased popularity of CAM in recent years.

In the studies conducted in our country it was stressed that religious practices were the prominent type of CAM approaches. Literary, studies have shown that cancer patients pray more often than patients with other chronic diseases. Studies have also shown that praying was effective in decreasing stress and anxiety, increasing positive attitudes and desire to live[18,19]. It was thought that individuals turn towards religious practices because of the fear of death.

Laughing is a treatment method that dates back to ancient ages. In an article published in the journal of Pediatric Oncology Nursing (2003), it has been stressed that laughter had an important role in supportive treatment to reduce the stress of children with cancer[18]. From this point of view it was pleasing that 82% of our patients used laughing.

Linden tea soothes nerves and regulates blood circulation. The polyphenols in green tea may reduce the risk for prostate, breast, esophageal, lung and bladder cancers. Grape seeds are used in prevention from cancer, peripheral venous insufficiency, respiratory tract diseases and to strength the immune system[18]. These herbal products are used frequently because information about their beneficial uses are broadcasted frequently in media. In addition, their hematinic and immune system strengthening effects are known and they are relatively cheap and easily accessible.

When we reviewed previously conducted studies, Uğurluer et al. reported that 89.6% of the individuals had tried and used stinging nettles at least once, Taş et al. reported the rate as 88%, Akyürek et al. as 59% and Erbaycu et al. as 50.2%[2,3,9,19]. In our study it was seen that 74% of the patients had never used stinging nettles. Recently, news has been broadcasted in media that stinging nettles have harmful effects during chemotherapy. These broadcast might have decreased the use of stinging nettles.

In our study, 42% of the patients stated that they had started using vitamins. This result is similar with the results of other studies and the fact that vitamins can be purchased over the counter without prescriptions has increased the vitamin consumption[3,7,8]. Fruits and vegetables are considered as cancer preventing food supplies with their vitamin and nutritional contents[20]. Can et al. have determined that 62.6% of the patients consumed vegetables, 29.1% consumed carrot juice and 33% consumed pomegranate juice[7]. In our study patients consumed fruit and vegetables (100%), carrots (98%), garlic (97%) and pomegranate (93%). It was thought that these fruits were consumed in high amounts because it was known that they contain high amounts of vitamin C.

Cancer cells use sugar 3-5 times more than healthy cells. The only harm of sugar is not that it nurtures cancerous tissue, but excessive consumption of flour and sugar causes weight gain and insulin resistance, and according to some sources their unbalanced consumption is a risk factor in diseases[20,21]. In the study conducted by Can et al. it was shown that 47.5% of the patients consumed bread and pastry and 44.1% consumed honey. In the study conducted by Algıer et al. 19.1% of the patients had started consuming honey[7,17]. In our study, 91% of the patients consumed pastry and milk desserts, 79% consumed honey and 67% consumed black mulberry. In society it is commonly believed that honey and black mulberry are very healthy and this may have led to the increased consumption during the disease.

Proteins are structural units of the body. The protein requirement increases to repair the damaged cells during cancer, chemotherapy, radiotherapy, infections and in the postoperative period. In situations like these higher amounts of protein must be included in the diet. The quality and cooking method of the protein is also important[20,21]. In the study conducted by Can et al. it

was seen that 64.8% of the patients consumed chicken, 60.3% consumed fish and 54.7% consumed milk and dairy products. In our study, 100% of the patients consumed fish, chicken and yoghurt, 92% consumed red meat and 89% consumed milk and dairy products.

Algıer et al. reported that cancer patients had used CAM not to leave any method untried (18.9%), to achieve psychological relaxation (13.5%). Avcı et al. reported that patients used CAM because they believed it would provide benefits (85.2%), others had had benefit (26.2%), it would provided hope for the treatment of their disease (23.5%) and as support for the medical treatment (23.5%)[15,22]. We also had similar findings.

Diseases are not only physical processes and psychosocial factors also play an important part evaluating the patients' quality of life. Aiming to increase the quality of life is the reason most commonly stated for the use of CAM. Some studies demonstrated a positive relationship between CAM use and quality of life, whereas others did not. In one study, the patients using a nutritional approach had higher scores of quality of life[23]. In contradiction, in another study, CAM users had a lower quality of life and poorer social wellness scores[24]. In another study the quality of life scores of patients using CAM did not improve in patients with brain tumours[25]. However, in our study the quality of life scores of patients using CAM was higher. According to these results, it can be concluded that more studies should be carried out to determine the effects of CAM use on the patients' quality of life.

In conclusion CAM use is very common among lung cancer patients in Turkey and it seems that the practice increases the quality of life of the patients.

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