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Original Article

Complementary alternative medicine in rheumatic diseases: Causes, choices, and outcomes according to patients

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Abstract

Objective: The knowledge of physicians about complementary and alternative medicine (CAM) applications is limited. However, especially in chronic diseases, patients and their relatives can often refer to CAM applications. Rheumatic diseases are chronic in nature presenting with a wide clinical spectrum. Despite developing treatment options, achieving treatment goals may not always be possible. For this reason, patients seek different treatment and use traditional and complementary medicine. The aim of this study was to investigate causes, consequences, and the frequency of applying to CAM in rheumatic diseases.

Methods: Ninety-five patients admitted to the rheumatology outpatient clinic were enrolled in the study. Health assessment questionnaire and short-form-36 were used to determine the quality of life of patients. Anxiety and depression symptoms were screened by the Hospital Anxiety and Depression scale, a questionnaire that was filled-in by the patients themselves. Also, patients were questioned about their place of residence, level of education, diagnosis, CAM modality types, application reasons, and outcomes. Chi-square test was used to analyze categorical data. Parametric data were analyzed using Student t-test, and nonparametric data were analyzed using Mann–Whitney U test.

Results: Thirty-two of our patients had applied to CAM modalities (phytotherapy [34.45%], cupping therapy [21.8%], acupuncture [12.5%], hirudotherapy [12.5%], food supplement [12.5%], and ozone treatment [6.25%]). Only 31.3% of the patients informed their doctors about CAM applications. 47.8% of fibromyalgia patients and 29.2% of patients with inflammatory rheumatic diseases had applied to CAM. Gender, working status, income level, smoking, and alcohol habits were not associated with the application to CAM. However, none of the residents of the village, 14.3% of the residents of the district center, and 41.1% of the residents of the city center had applied to CAM modality. The rate of applying to CAM was 18.2% for those who cannot read and write. The application ratio of CAM is over 40% among secondary school, high school, and university graduates.

Conclusion: Among patients with rheumatic diseases, application to CAM is quite common. Very few patients inform their physicians about applying to CAM. Contrary to what is presumed, the rate of applying CAM applications is lower among those living in rural areas and with low education levels.

Keywords: Complementary and alternative medicine, rheumatic diseases, fibromyalgia

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Introduction

Interest in complementary and alternative medicine (CAM) applications has increased steadily in recent years in the world and our country.[1] CAM applications include healthcare methods, products, and practices that are often used to improve and protect the health, treat diseases, and cope with symptoms.[2,3] Acupuncture, ozone, mesotherapy, homeopathy, phytotherapy, prolotherapy, hirudotherapy, hypnosis, reflexology, osteopathy, chiropractic, apitherapy, cupping, and music therapy methods are among CAM applications.[3]

The use of CAM has increased significantly in developed and developing countries. However, commercial value of herbal medicines on the international market is high and increasing greatly. Hence, in most countries, the safety and efficacy of CAM have become important concerns for both health authorities and the public.[4]

The knowledge of physicians about applications is limited, and they often approach CAM practices with prejudice.[5] However, especially in chronic diseases, patients and their relatives can often apply to CAM

applications. It is known that approximately half of the patients apply to CAM applications.[6,7]

Rheumatic diseases are chronic diseases that have very different clinical features but share symptoms such as pain and fatigue. All these diseases have a major impact on patients' daily life, requiring considerable effort to cope with the illness.[8] Despite developing treatment options, achieving treatment goals may not always be possible. In addition, due to the chronic nature of the disease, patients may have to use medication for a long time, perhaps for life.

As with many health problems, the use of CAM has also been studied in rheumatic diseases, especially rheumatoid arthritis, spondylarthritis, and gout, in terms of alternative treatment or protective properties.[9-11] CAM applications vary from country to country and from region to region.[4] There are limited number of studies on this subject in our country and especially in our region. The aim of this study was to investigate the frequencies, causes, and consequences of applying to CAM modalities, in rheumatic diseases.

Methods

This study was approved by the Fırat University School of Medicine Noninvasive Research Ethics Committee (Approval Date: November 22, 2017; protocol code: 97132852/050.01.04/). The study was performed between June 2018 and January 2019 among patients who applied to university's rheumatology outpatient clinic. The study was conducted on a voluntary basis, and a total of 95 patients who agreed to participate were included in the study. Patients were questioned about their diagnosis, CAM application types, and reasons and outcomes of CAM applications. In addition, the demographic data, marital status, educational level, region of residence, and financial status of the patients were questioned. The money spending and response status of the patients to CAM applications were investigated.

Main Points

- Complementary and alternative medicine applications are common in patients with rheumatic diseases.
- Very few of the patients inform their physicians about complementary and alternative medicine applications.
- Patients should be persistently questioned about complementary and alternative medicine applications.

The patients were questioned for their diagnosis, and their files were examined and confirmed. Each patient was checked to meet each diagnostic/classification criteria for each disease;[12–18] health assessment questionnaire (HAQ) and short-form-36 (SF-36) were used to determine the quality of life of the patients.[19,20] Anxiety and depression symptoms were screened by the Hospital Anxiety and Depression (HAD) scale, a questionnaire that was filled-in by the patients themselves and used frequently in the hospital.[21]

Statistical anaylsis

The data were analyzed using SPSS version 22 (IBM Corp., Armonk, NY, USA). Chi-square test was used to analyze the categorical data. Parametric data were analyzed using Student t-test, and nonparametric data were analyzed using Mann–Whitney U test. *P* values less than .05 were considered as statistically significant.

Results

Demographic and clinical data of the participants are presented in Table 1. Thirty-two (33.7%) of our patients stated that they applied to any CAM modality. For this purpose, among CAM applications, phytotherapy (n = 11, 34.45%), cupping therapy (n = 7, 21.8%), acupuncture (n = 4, 12.5%), hirudotherapy (n = 4, 12.5%), food supplements (n = 4, 12.5%), and ozone treatment (n = 2, 6.25%) were selected. When SF-36 subscores were compared, pain scores were low ($P = .05$) and social functioning was high ($P < .05$) in patients receiving CAM. A comparison was made according to the place of residence where patients receiving CAM mostly resided in the city center and town center ($P < .05$).

When rheumatic diseases were divided into diagnostic subgroups, it was determined that fibromyalgia and scleroderma patients applied to CAM at a higher rate (Table 2). 47.8% of patients with fibromyalgia and 29.2% of patients with inflammatory rheumatic disease had applied to a CAM application ($P = .099$). Anxiety and depression status of all participants were evaluated using the HAD scale. The frequency of anxiety was 31.6%, and the frequency of depression was 51.6% in our patients (Table 3). The frequencies of anxiety and depression were not significantly different in the applicants and nonapplicants of CAM modality ($P > .05$).

Only 31.3% of the patients informed their physician that they applied to the CAM modality. On the other hand, 21.9% of the patients reported that they applied to CAM applications with the recommendation of doctors or other healthcare workers. The most common reason for accepting CAM was pressure from family members (62.5%).

Among the admitted patients, 35% of patients were women and 29.2% were men ($P = .588$); 25% of the singles and 35.4% of the married participants ($P = .420$) had applied to CAM modality. Similarly, gender, working status, income level, smoking, and alcohol habits were not associated with the application to CAM. However, none of the residents of the village, 14.3% of the residents of the district center, and 41.1% of the residents of the city center had applied to CAM modality ($P = .016$) (Table 4 and Figure 1). The rate of applying to CAM applications was 18.2% for those who cannot read and write; this ratio was over 40% among secondary school, high school, and university graduates. There was no statistical difference between the groups in terms of education level in patients receiving CAM ($P = .428$).

While 21.8% (n = 7) of the patients using CAM received complete response, 50% (n = 16) reported partial response; 28.1% (n = 9) of the patients reported no response. In other words, 71.9% (n = 23) of the patients were talking about partial or complete response. The proportion of those responded to CAM (partial and full) was 72.7% (n = 8) in phytotherapy, 71.4% (n = 5) in cupping therapy, 75% (n = 3) in acupuncture, 25% (n = 1) in hirudotherapy, 100% (n = 4) in food supplementation, and 100% (n = 2) in ozone treatment (Table 5).

CAM response when evaluated according to diseases was observed that the response to CAM applications was almost similar, and the differences between them did not have statistical significance (Table 2). In addition, it was found that the response rate to CAM applications was similar in patients with different HAD scales (Table 3). However, the HAQ score was 0.35 ± 0.34 in the patients who responded to CAM and 0.78 ± 0.57 in those who did not respond ($P = .014$).

Thirteen patients (40.6%) reported that they did not pay any fee for any CAM application. Of those who did not pay, 3 (23.1%) reported no response, 5 (38.5%) reported partial response, and 5 (38.5%) reported full response. For those who did pay any fees (n = 19), these rates were as follows: 15.8% (n = 3) reported no response, 21.1% (n = 4) reported partial response, and 63.1% (n = 12) reported full response. The proportion of those who showed a full response was relatively high among those who paid fees, but differences in effectiveness between those who paid and those who did not were not statistically significant ($P = .362$).

Table 1. Demographic and clinical data of the participants.

		CAM application		
	All patients (n = 95)	Existent (n = 32)	None (n = 63)	*P*
Average age (years)	41.6 ± 11.4	41.9 ± 9.6	41.4 ± 12.3	.831
Proportion of women, n (%)	71 (74.7)	25 (78.1)	46 (73)	.588
Marital status (married), n (%)	79 (83.2)	28 (87.5)	51 (81)	.420
HAQ score	0.45 ± 49	0.48 ± 0.46	0.44 ± 0.51	.728
SF-36 subscores				
Physical functionality	57.1 ± 22.7	54.4 ± 24.6	58.4 ± 21.8	.415
Physical role difficulty	30.6 ± 37.2	23.3 ± 33.3	34.4 ± 38.8	.171
Pain	39.1 ± 23.4	32.7 ± 21.1	42.3 ± 23.9	.051
General health perception	39.1 ± 19.4	36.2 ± 19.3	40.5 ± 19.5	.320
Viability/vitality	42.2 ± 18.4	36.7 ± 18.3	43.4 ± 19.1	.364
Social functionality	58.3 ± 24.1	50.8 ± 21.9	62.3 ± 24.4	.028
Emotional role difficulty	33.3 ± 36.5	27.1 ± 38.3	36.6 ± 35.3	.233
Place of residence				.016
Village-countryside, n (%)	8 (8.4)	0 (0)	8 (100)	–
Town center, n (%)	14 (14.7)	2 (14.3)	12 (85.7)	–
City center, n (%)	73 (76.8)	30 (41.1)	43 (58.9)	–
Education				.428
Cannot write and read, n (%)	11 (11.6)	2 (18.2)	(81.8)	–
Primary school graduate, n (%)	26 (27.4)	7 (26.9)	19 (73.1)	–
Secondary school graduate, n(%)	9 (9.5)	4 (44.4)	5 (55.6)	–
High school graduate, n (%)	22 (23.2)	9 (40.9)	13 (59.1)	–
University graduate, n (%)	24 (25.3)	10 (41.7)	14 (58.4)	–
Average monthly income				.179
Below 3,000 TL, n (%)	30 (31.6)	13 (43)	17 (57)	–
Over 3,000 TL, n (%)	65 (68.4)	19 (29.2)	46 (70.8)	–
Status of exposure to smoking				.913
Currently using, n (%)	24 (25.3)	8 (33.3)	16 (66.7)	
Previously used, n (%)	20 (21.1)	6 (30)	14 (70)	
Never used, n (%)	51 (53.7)	18 (35.3)	33 (64.7)	
Health assurance				.078
None, n (%)	4 (4.2)	0 (0)	4 (100)	
Private health insurance, n (%)	4 (4.2)	3 (75)	1 (25)	
Public health insurance, n (%)	87 (91.6)	29 (33.3)	58 (66.7)	

CAM, complementary and alternative medicine; SF-36, short-form-36; HAQ, health assessment questionnaire.

Discussion

It was determined that 33.7% of our patients used a CAM application. It is clear that this rate is lower than previously reported.[1,2,6,22] In our study, it was shown that the tendency to CAM application was lower among the patients living in rural areas and those with low education levels. In previous studies, the tendency to apply to CAM in different regions was reported to be different.[2,23] These findings support that regional diversity is due to the differences in the education level of the patients and the regions where they live. The low CAM application rate in our study may be due to the fact that our center provides more services to rural patients.

Due to increased interest in CAM applications, CAM has been included in the medical faculty curriculum in many countries.[24] Patients' orientation to CAM may be related to their thinking that they have fewer side-effects and safer than standard medical therapies. Furthermore, there is no doubt that widespread and effective advertising by CAM practitioners contributes to this trend.

In our study, CAM is applied by 47.8% of patients with fibromyalgia and 29.2% of patients with inflammatory rheumatic diseases. It has previously shown that the tendency to CAM administration is higher in noninflammatory diseases.[6] Patients with fibromyalgia are known to experience more severe pain and poor social functioning.[25] In our study, it was shown that pain and loss of social functioning

Table 2. CAM applications according to diagnoses.

	CAM application	
Diagnostics (n = 95)	The applicants, n (%)	Responders, n (%)
Rheumatoid arthritis (n = 26)	7 (26.9)	4 (57.1)
Systemic lupus erythematosus (n = 3)	1 (33.3)	1 (100)
Sjogren's syndrome (n = 8)	2 (25)	1 (50)
Scleroderma (n = 7)	4 (57.1)	2 (50)
Ankylosing spondylitis (n = 22)	4 (17.4)	3 (75)
Psoriatic arthritis (n = 5)	2 (40)	2 (100)
Behcet's disease (n = 1)	1 (100)	1 (100)
Fibromyalgia (n = 23)	11 (47.8)	9 (81.8)

CAM, complementary and alternative medicine.

Table 3. CAM applications according to the presence of anxiety and depression.

		CAM application	
HAD scale (n = 95)	n (%)	The applicants, n (%)	Responders, n (%)
HAD Anxiety Score 0-7 (normal)	38 (40)	11 (28.9)	8 (72.7)
HAD Anxiety Score 8-10 (borderline)	27 (28.4)	12 (44.4)	8 (66.7)
HAD Anxiety Score 11-21 (anxiety)	30 (31.6)	9 (30)	7 (77.8)
P		.375	.852
HAD Depression Score 0-7 (normal)	22 (23.2)	6 (27.3)	4 (66.7)
HAD Depression Score 8-10 (borderline)	24 (25.3)	9 (37.5)	5 (55.6)
HAD Depression Score 11-25 (depression)	49 (51.6)	17 (34.7)	14 (82.4)
P		.747	.335

HAD, Hospital Anxiety and Depression. CAM, complementary and alternative medicine.

Table 4. CAM applications according to residential area and education.

	CAM application	
	The applicants, n (%)	Responders, n (%)
Lives in village-countryside (n = 8)	0	–
Lives in the town center (n = 14)	2 (14.3)	1 (50)
Lives in the city center (n = 73)	30 (41.1)	22 (73.3)
P	.016	.477
Cannot write and read (n = 11)	2 (18.2)	1 (50)
Primary school graduate (n = 26)	7 (26.9)	4 (57.1)
Secondary school graduate (n = 9)	4 (44.4)	3 (75)
High school graduate (n = 22)	9 (40.9)	6 (66.7)
University graduate (n = 24)	10 (41.7)	9 (90)
P	.428	.559

CAM, complementary and alternative medicine.

were worse in CAM users. In noninflammatory diseases, especially fibromyalgia, pain that cannot be relieved (cannot be cured completely) can cause unfulfilled wishes in patients, and thus, they can put them in search of different treatments.

Given that CAM applications may increase the toxicity of medical drugs, it is always necessary to investigate the patient's use of CAM. However, very few patients inform their physicians that they use these practices. The reason for this may be that physicians do not have enough information about CAM applications.[5,26] Contrary to this view, 21.9% of our patients reported that they applied to CAM application with the recommendation of their physician or other healthcare workers. Şaş et al[22] reported that 18.1% of their patients applied to CAM application on the advice of their doctors. These findings support the opinion that physicians and healthcare workers have a little opinion about CAM applications. Family members were the most important factor that directed patients to a CAM application.

Our patients chose phytotherapy most frequently. Cupping therapy, acupuncture, hirudotherapy, and food supplements were used in similar proportions. Ozone treatment was the least preferred. Phytotherapy is the most preferred CAM among patients with rheumatic diseases.[2,22] Since the CAM centers in the region are easy to reach, it is expected that different results will be seen in studies from different regions about other CAM applications.

It was found that most of the patients using a CAM application reported a response. Fibromyalgia patients had higher rates of response than those with inflammatory diseases. Patients with rheumatoid arthritis, scleroderma, and Sjögren's syndrome have a lower response rate. Hirudotherapy was the lowest effectiveness in the CAM methods. All patients receiving ozone treatment and food supplements expressed that their wishes were met and they received responses. The response to CAM applications varies from patient to patient, and it is not possible to explain variability only with patient psychology. Therefore, the focus is on the pharmacogenomic effect. With the development of these applications, more positive results can be obtained with CAM.

In conclusion, the CAM application is common in patients with rheumatic diseases. Very few of the patients inform their physicians about the CAM application and most of them prefer not to. Patients should be persistently questioned about CAM application because of the increased risk of toxicity when used in conjunction with existing medical therapies. Increasing the knowledge level of physicians about CAM applications will increase the likelihood of achieving treatment goals in patients.

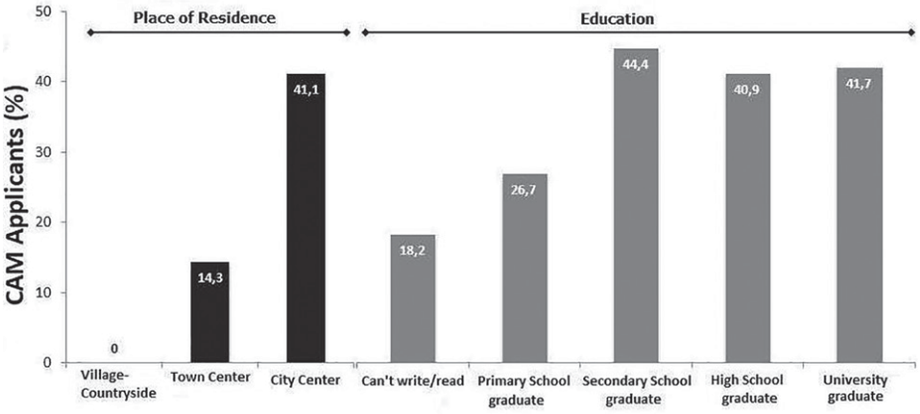

Figure 1. Proportion of patients applying to CAM by their regions and education. CAM, complementary and alternative medicine.

Table 5. The response rates in each application of CAM modality.

	Full response, n (%)	Partial response, n (%)	No-response, n (%)
Phytotherapy (n = 11)	1 (9.1)	7 (63.6)	3 (27.3)
Cupping therapy (n = 7)	2 (28.6)	3 (42.9)	2 (28.6)
Acupuncture (n = 4)	1 (25)	2 (50)	1 (25)
Hirudotherapy (n = 4)	0	1 (25)	3 (75)
Ozone treatment (n = 2)	2 (100)	0	0
Food supplement (n = 4)	1 (25)	3 (75)	0

CAM, complementary and alternative medicine.

Ethics Committee Approval: Ethics committee approval was received for this study from the Fırat University School of Medicine Noninvasive Research Ethics Committee (Approval Date: November 22, 2017; Approval Number: 97132852/050.01.04/).

Informed Consent: Written informed consent was obtained from the patients who participated in this study.

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