



Complementary Alternative Medicine Methods Preferred By Women Diagnosed With Urinary Tract Infections

İdrar Yolu Enfeksiyonları Tanısı Alan Kadınların Tercih Ettikleri Tamamlayıcı Alternatif Tedavi Yöntemleri

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Abstract

Introduction: The study was planned to determine the causes of infection in women diagnosed with urinary tract infections and the preferred complementary and alternative treatment methods of the women.

Material and Method: In the study, 180 women diagnosed with urinary tract infection (UTI) were interviewed. The required permissions were received. The data descriptive information form and Complementary and Alternative Medicine (CAM) Scale were used.

Results: The average age of women participating in the study is 40.21±15.42. 73.4% of the participants were diagnosed with more than one UTIs in one year. Almost all of the women who participated in the study stated that they used a complementary and alternative medicine method for UTIs (92.8%) and 97.8% of them expressed that this method was effective.

The use of CAM methods was more common in those with higher education, housewives or retired, women, those who performed vaginal douching had chronic diseases or incontinence. The use of CAM is less in those who are diagnosed with more than three UTIs in a year.

Conclusion: The most commonly used herbal methods are parsley, rosehip, green tea, nettle, linden, thyme and chamomile; dietary methods are yogurt, milk and dairy products, honey, pomegranate, garlic; religious methods are prayers; the psychological approach is exercise.

Keywords: Urinary tract infection, preference, women, complementary and alternative treatment methods

Öz

Amaç: Çalışma, idrar yolları enfeksiyon tanısı alan kadınlarda enfeksiyon sebepleri ve tercih ettikleri tamamlayıcı ve alternatif tedavi yöntemlerini belirlemek için planlandı.

Gereç ve Yöntem: Çalışmada idrar yolları enfeksiyonu (İYE) tanısı alan 180 kadınla görüşüldü. Gerekli izinler alındı. Veriler tanımlayıcı bilgi formu ile Tamamlayıcı ve Alternatif Tıp Yaklaşımları Ölçeği kullanıldı.

Bulgular: Çalışmaya katılan kadınların yaş ortalaması 40.21±15.42 dir. Katılımcıların %73.4'ü bir yılda birden fazla İYE tanısı almış, çalışmada kadınların hemen hemen hepsi İYE için (%92.8) herhangi bir tamamlayıcı ve alternatif tedavi yöntemi kullanmış ve %97.8'i yöntemin etkili olduğunu ifade etmiştir. Eğitim durumu yüksek olanlarda, ev hanımı ya da emekli olanlarda, vajinal duş yapanlarda, kronik bir hastalığı veya inkontinansı olanlarda TAT kullanımı daha yaygındır. Bir yılda üçten fazla sayıda İYE tanısı alanlarda TAT kullanımı daha azdır.

Sonuç: En sık kullanılan bitkisel yöntemler; maydanoz, kuşburnu, yeşil çay, ısırgan, ihlamur, kekik ve papatyadır. En sık kullanılan besinsel yöntemler; yoğurt, süt ve süt ürünleri, bal, nar, sarımsak, en sık kullanılan dini yöntemler; dua etmek ve namaz, en sık kullanılan ruhsal yaklaşım ise egzersizdir.

Anahtar Kelimeler: İdrar yolu enfeksiyonu, tercih, kadın, tamamlayıcı ve alternatif tedavi yöntemleri



INTRODUCTION

Urinary tract infections (UTIs) are the microbial infiltration of the sterile urinary tract and are one of the most frequently seen bacterial infections across the world. UTIs covers urethra (urethritis), urinary bladder (cystitis), ureter (urethritis) and kidney (pyelonephritis) infections. It is estimated that annually more than 8 million UTIs people suffer from in the United States and many of them consult a physician. About 1% of patients diagnosed with UTIs receive antibiotic treatment requiring hospitalization.^[1]

UTIs are one of the most common bacterial infections affecting women. In particular, they affect 50-60% of young and sexually active women. Approximately one in three women gets antibiotic treatment before the age of 24, the infection is repeated within 6 months and the UTI attack is experienced at least once in one-fourth of women.^[2] UTIs in Turkey is one of the most common infections in outpatient services in both in inpatient facilities. According to reports from Turkey, 21-49% of hospital-acquired infections are urinary tract infections.^[3] The passage of fecal bacteria in the urinary tract is easier in women than in men because of the shorter urethra, the proximity of the urethral meatus to the anus and the anatomical structure of women. In addition, among other risk factors, the diagnosis of UTIs before the age of 15 years, the history of UTIs in the mother or previous experience with UTIs and the use of spermicides as a method of contraception play a part.^[2] The colonization of gastrointestinal pathogens during the coitus, urinary system obstruction, incomplete micturition, abnormal anatomical structure and low vaginal estrogen level are among the causes of UTIs as well.^[4]

Recurrent UTIs are the occurrence of three infections in one year or more than two infections in six months. The main symptoms of UTIs are dysuria, frequent urination, cloudy urine and sometimes hematuria.^[5] In general, UTIs without complications are limited to the bladder and are healed rapidly after antibiotic treatment. For this reason, they are less serious, but it can causes long-term sequelae. Even if they are not seen as very disturbing, UTIs without complications decreases the quality of life and productivity of the patient. In a study carried out with women studying at the university, among the patients diagnosed with UTIs it was reported that for 2.4 days their activity was limited, for 1.2 days they lost time and for 0.4 days they were confined to bed due to symptoms.^[6]

The total cost associated with community-based UTIs including doctor visits, antibiotic prescriptions, hospitalizations and sick leave is reported to be approximately \$1.6 billion each year in the United States.^[7] For the treatment of UTIs, multiple antibiotic treatments are used in general, and afterward, resistance to the drugs develops. Effective alternative and complementary therapies are important especially for the treatment of recurrent UTIs. Herbal products are widely used although there are not many studies on such products used to relieve urinary symptoms. The leaf extract of *Arctostaphylos uva-ursi* (uva-ursi or bearberry) has been approved by the German Federal Institute of Drugs and Medical Devices for

the use of urinary tract inflammation and is supplied with a prescription in Germany. It is reported that these plants have diuretic, urinary antiseptic and anti-inflammatory properties. Extract components include flavonoids, iridocyte, hydroquinone glycosides (mainly arbutine), tannins and terpenoids.^[8] There is evidence that the *Uva-Ursi* plant is used in the United Kingdom to relieve symptoms of acute UTIs. In a study carried out with 309 women, it was reported that uvacin which contains uva-ursi was reduced the duration of the disease. However, although the numbers that indicate the use of the product are low, the recommended rates are high.^[9]

In studies in Turkey it is widely used Complementary and Alternative Medicine (CAM) method. There are many studies especially on cancer, menopausal period, infertility, diabetes, metabolic diseases.^[10-12] However, as a result of the literature review, there are insufficient number of studies on CAM methods and effects used for UTI. In fact, there is no study about the methods used CAM to treat UTI in Turkey. The aim of the present study was, to determine the causes of UTIs in women in Turkey, the infection as well as the complementary and alternative treatment methods they prefer to cope with it.

MATERIAL AND METHOD

Sampling Technique, Inclusion Criteria

The study is quantitative, descriptive and cross-sectional. The study was carried out in Gümüşhane, a province of the Eastern Black Sea region. The level of education is below the average in Turkey. The research population was composed of women who applied to a public hospital urology and gynecology polyclinic in Gümüşhane. The sample consists of 180 women who were reached between 20.02.2018-20.06.2018 and have the criteria for inclusion in the study. Women who applied to outpatient clinics, able to communicate in Turkish; were between the ages of 20-65 and diagnosed with UTI in the past year were included in the study. Patients who had a social or psychological status that would prevent them from participating in the study, women who were newly diagnosed and patients who did not wish to participate in the study after being informed of it were excluded.

Data Collection

In order to collect the data comfortably and safely, women were interviewed in a suitable outpatient clinic. The purpose of the study was explained to the participants, verbal consent was obtained from those who wanted to participate in the study and data were collected. A woman was interviewed for about 20 minutes.

Descriptive Information Form, and Complementary and Alternative Medicine Scale (CAMS) were used in the collection of the study data. The Descriptive Information Form consists of two parts. The first part questions the socio-demographic characteristics and the second part questions the risk factors for UTIs and includes questions about perineum hygiene, chronic diseases, family planning methods, sexually transmitted infections and UTIs.

Complementary and Alternative Medicine Scale: The Complementary and Alternative Medicine Scale was improved by Can et al. The scale consists of five subgroups of 55 CAM interventions often used. The five subgroups are as follows: herbal supplement subgroup (29 items), religious practices subgroup (5 items), mind-body practices subgroup (5 items), biological practices subgroup (3 items) and dietary supplement subgroup (14 items). CAMS assesses the use of individual CAM methods by dichotomous responses, where 0 means "no" and 1 means "yes". Sub-dimension scores were estimated by summing up the scores of individual items and the total score of the scale is the sum of individual sub-dimension scores. The Kuder-Richardson 20 (KR20) coefficient for the scale was 0.84.^[13]

Ethical considerations

The required permission to conduct the study was obtained from the administration unit of the Health Directorate and from the Scientific Research and Publication Board of XXX University (Number=95674917-604.01.02). Eligible women were informed about the study. Verbal consent was obtained from the women, who accepted to participate in the study. Each woman was interviewed for 15 minutes to fill in the data collection questionnaire.

Data Analysis and Interpretation

The data obtained as a result of the research were evaluated with SPSS-22 program, error checks, tables and statistical analyzes were made. Numbers and percentages are given in statistical evaluations. Before normality analysis, missing data and extreme value extractions were made. Afterwards, histogram drawings were made for compliance with normal distribution, skewness and kurtosis values were examined, and Kolmogorov-Smirnov analyzes were performed. After all the steps, logarithmic transformations were applied to the CAMS, which did not show normal distribution, but it was determined that normal distribution conditions did not occur. Therefore, in order to determine whether independent variables make a difference on CAM, Mann-Whitney U and Kruskal Wallis tests was performed. $p < 0.05$ was accepted as statistical significance level.

RESULTS

Some socio-demographic characteristics of the women are shown in **Table 1**. The mean age of the participants was 40.21 ± 15.42 (min=18, max=65). 45.0% of the participants were primary school graduates, 61.1% were housewives/reired, and the income of 58.3% of the women equaled to their expenses.

The mean Body Mass Index (BMI) of the women was 26.05 ± 5.05 (min=15, max=43) and the mean number of pregnancies was 2.91 ± 2.71 (min=0, max=12). Some characteristics of genital hygiene are shown in **Table 2**.

Table 1. Some socio-demographic characteristics of women

Educational Background	n	%
Primary school graduate	81	45.0
Secondary/high school graduate	38	21.1
University graduate	61	33.9
Total	180	100.0
Income status	n	%
Income is less than Expense	66	36.7
Equal Income&Expense	105	58.3
Income is much more than Expense	9	5.0
Total	180	100.0
Employment Status	n	%
Housewife /Retired	110	61.1
Employed	37	20.6
Student	33	18.3
Total	180	100.0
Abode	n	%
Married	127	70.6
Single/Separated	52	29.4
Total	179	100.0

Forty-six percent of the women changed their pad every 3-4 hours during menstruation period, 51.1% performed vaginal douching (wash the vagina), 58.9% of them wore cotton underwear and 32.2% of them complained of urinary incontinence. 73.4% of the participants were diagnosed with more than one UTI in one year.

As a result of the evaluation of some variables of the participants diagnosed with a UTI in one year it was found that housewives, those with low education level, who wash their hands only after leaving the toilet, those who washed from the front to the back, the ones who perform vaginal douching, those who do not care to wear cotton underwear were more likely to experience a UTI in a year ($p < 0.05$). There were no statistically significant differences in the prevalence of UTI diagnoses within a year due to income status, smoking, the number of pad changes, the frequency of changing underwear, being sexually active and urinary incontinence ($p > 0.05$).

The number of women diagnosed with UTI in a year; was high in housewives ($\chi^2=17.884$, $p=0.007$), those with low education levels ($\chi^2=19.124$, $p=0.004$), those who performed vaginal douching ($\chi^2=9.499$, $p=0.023$), those with chronic diseases ($\chi^2=13.012$, $p=0.0009$) and those with urinary incontinence complaints ($\chi^2=12.939$, $p=0.005$).

Almost all of the women who participated in the study stated that they used a CAM method for UTIs (92.8%) and 97.8% of them expressed that the method was effective. CAM methods used by women with UTI diagnosis are shown in **Table 3**.

The use of CAM was common in women diagnosed with UTI (73.3% of them used herbal, 75.6% nutritional, 76.7% religious and 17.8% psychological approaches). The most commonly used herbal methods were parsley, rosehip, green tea, nettle, linden, thyme and chamomile; the dietary methods were yogurt, milk and dairy products, honey, pomegranate, garlic; religious methods were prayers and the psychical approach was exercise.

Table 2. Some characteristics of women concerning genital hygiene

The frequency of changing pad	n	%
1-2 hours	26	20.6
3-4 hours	58	46.0
5-6 hours	26	20.6
6 hours or more	16	12.8
Total	126	100.0
Cleanliness	n	%
With water	49	27.2
With toilet paper	12	6.6
With water and toilet paper	118	65.6
With water and soap	1	0.6
Total	180	100.0
Frequency of changing underwear	n	%
One time per week	11	6.1
Two-three times per week	97	53.9
Daily	60	33.3
2 times a day	12	6.7
Total	180	100.0
Sexual activity	n	%
Yes	98	54.4
No	82	45.6
Total	180	100.0
How many times a year diagnosed with UTI	n	%
Once	48	26.6
Two-three times	64	35.6
Four-five times	34	18.9
Six and more times	34	18.9
Total	180	100.0
Birth control (BC) method	n	%
Yes	70	38.8
No	110	61.2
Total	180	100.0
The vaginal douching	n	%
Yes	92	51.1
No	88	48.9
Total	180	100.0
Handwashing	n	%
Before toilet	3	1.7
After toilet	109	60.6
Before and after toilet	66	36.6
Do not care	2	1.1
Total	180	100.0
How the cleanliness provided	n	%
Front to back	102	56.7
Back to front	64	35.6
Do not care	14	7.8
Total	180	100.0
Underwear feature	n	%
I wear cotton underwear	106	58.9
I wear synthetic underwear	5	2.8
Do not care	69	38.3
Total	180	100.0
STI experience	n	%
Yes	18	10.0
No	162	90.0
Total	180	100.0
Urinary incontinence	n	%
Often	30	16.7
Occasionally	27	15.0
Rarely	1	0.6
Never	122	67.7
Total	180	100.0
Preferred BC methods	n	%
Contraceptives	8	11.5
Intrauterine device	20	28.5
Condom	11	15.8
Withdrawal method	28	40
Tubal ligation	3	4.2
Total	70	100.0

UTI: Urinary tract infections, BC: Birth control, STI: Sexually Transmitted Infections

Table 3. Use of CAM Therapies* (n=356)

Herbal supplements	n	%
VStinging nettle	41	22.8
Rosehip	95	52.8
Linden tea-	43	23.9
Grape seed	4	2.2
Daisy	34	18.9
Green tea	51	28.3
Sage tea	17	9.4
Nigella sativa	19	10.6
Blueberries	3	1.7
Mallow	4	2.2
Ginger	11	6.1
Sweet almond	2	1.1
Curcuma	6	3.3
Flax seed	1	0.6
Vitamin	12	6.7
Centaury	3	1.7
Thyme	28	15.6
Yarrow	2	1.1
Juniper	1	0.6
Omega 3	3	1.7
Other		
Onion juice	38	21.1
Apple cider vinegar	17	9.5
Cherry stalk	6	3.3
Parsley	102	56.7
Mind-body practices	n	%
Exercise	31	17.2
Meditation	-	-
Yoga	-	-
Acupuncture	1	0.6
Music	-	-
Dietary supplements	n	%
Yoghurt	101	56.1
Milk and milk products	97	53.9
Honey	62	34.4
Carob syrup	14	7.8
Anzer honey	1	0.6
Mullberry syrup	9	5.6
Chestnut honey	1	0.6
Pomegranate	20	11.1
Grapefruit	6	3.3
Garlic	26	14.4
Carrot	15	8.3
Other fruits and vegetables	25	13.9
Red meat	11	6.1
Fish	9	5.6
Chicken	3	1.7
Bread/pastry	3	1.7
Sweet-tat	3	1.7
Other (kefir)	5	2.8
Religious practices	n	%
Namaz**	58	32.2
Pray	132	73.3
Carry written amulet	9	5.6
Visit place where holy man is buried	2	1.1
Biological practices	-	-

* Some patients used more than one CAM therapy so the percentages of CAM use are given according to the related item.

** Namaz= Prayer performed by Muslims five times a day.

The methods used by the participants for coping with UTIs were drinking plenty of water, particularly making hot application to feet and taking a warm shower. The comparison of sub-dimension and total score averages of CAM scale according to the characteristics of the participants is shown in **Table 4**.

The use of CAM methods was more common in those with higher education, housewives or retired, women, those who performed vaginal douching had chronic diseases or incontinence. The use of CAM methods was less in patients who suffered from more than three UTIs in a year and there was a significant difference between them.

DISCUSSION

UTIs are very common in the community, can be easily treated and can cause morbidity, and sometimes, although very rarely, cause mortality. UTIs are bacterial infections that are most common among females and reduce the quality of life.^[14] Although they require proper antibiotic treatment, 30-50% of women who have UTIs have a recurrent infection in 6-12 months. The chronic recurrent UTIs (more than two in one year) are present in 2-5% of women.^[15] It was reported in a study that women had a higher risk of contracting a second UTI after the first one, and 20% of patients had a recurrence within 6 months.^[16] In this study, it was observed that the rate of women diagnosed with more than one UTI in a year was 73.4%. The rate of women diagnosed with four or more was 37.8%. The woman diagnosed with UTIs once had a risk for subsequent infections.

Table 4. Comparison of sub-dimension and total score averages of CAM scale according to characteristics of the participants

	Herbal Approaches Median (%95 CI)	Nutritional Approaches Median (%95 CI)	Religious Approaches Median (%95 CI)	Spiritual Approaches Median (%95 CI)	Total Median (%95 CI)
Educational Background					
Primary	2.00 (1.97-2.86)	2.00 (1.77-2.76)	2.00 (1.29-1.74)	0.00 (0.10-0.28)	6.00 (5.44-7.37)
Secondary/high	2.00 (1.78-3.00)	2.00 (2.03-2.65)	2.00 (1.46-2.00)	0.00 (0.11-0.40)	7.00 (5.78-7.69)
University	1.00 (1.09-1.95)	2.00 (1.62-2.73)	2.00 (1.07-1.54)	0.00 (0.02-0.17)	5.00 (4.13-6.09)
Test value	KW= 9.193 p= 0.010	KW= 1.683 p= 0.431	KW= 4.050 p= 0.132	KW= 4.717 p= 0.095	KW= 7.314 p= 0.026
Employment Status					
Housewife	2.00 (2.00-2.75)	2.00 (1.89-2.63)	2.00 (1.39-1.75)	0.00 (0.10-0.25)	6.00 (5.64-7.15)
Employed	1.00 (1.25-2.47)	2.00 (1.55-2.55)	2.00 (1.09-1.77)	0.00 (0.05-0.32)	5.00 (4.36-6.71)
Student	1.00 (0.92-2.04)	2.00 (1.55-3.35)	2.00 (0.97-1.62)	0.00 (0.02-0.28)	5.00 (3.92-6.85)
Test value	KW= 6.261 p= 0.044	KW=0.047 p= 0.977	KW= 2.034 p= 0.362	KW= 0.200 p= 0.905	KW= 2.877 p= 0.237
The vaginal douching					
Yes	2.00 (1.85-2.66)	2.00 (1.92-2.70)	2.00 (1.32-1.71)	0.00 (0.14-0.31)	7.00 (5.54-7.10)
No	2.00 (1.55-2.35)	2.00 (1.74-2.64)	2.00 (1.26-1.67)	0.00 (0.05-0.19)	5.00 (4.86-6.61)
Test value	U= 3651.000 p= 0.247	U= 3751.000 p= 0.386	U= 3958.500 p= 0.772	U= 3630.000 p= 0.071	U= 3544.000 p= 0.148
Chronic disease condition					
Yes	2.00 (1.69-2.64)	2.00 (1.88-2.88)	2.00 (1.39-1.83)	0.00 (0.06-0.24)	7.00 (5.39-7.25)
No	2.00 (1.72-2.43)	2.00 (1.81-2.54)	2.00 (1.24-1.60)	0.00 (0.11-0.26)	5.00 (5.12-6.62)
Test value	U= 3622.500 p= 0.727	U= 3517.000 p= 0.503	U= 3367.000 p= 0.212	U= 3597.500 p= 0.529	U= 3379.000 p= 0.284
Diagnosis of UTI in one year					
Once	2.00 (1.43-2.69)	2.00 (1.76-2.86)	2.00 (1.50-2.04)	0.00 (0.05-0.27)	5.50 (5.10-7.51)
Twice-Thrice	2.00 (1.89-2.82)	3.00 (2.26-3.38)	2.00 (1.35-1.79)	0.00 (0.11-0.32)	7.00 (5.92-8.03)
4-5 times	1.00 (0.96-2.03)	2.00 (1.14-2.02)	1.00 (0.74-1.48)	0.00 (0.02-0.27)	4.00 (3.37-5.33)
6 and more	2.00 (1.65-2.99)	2.00 (1.05-2.47)	2.00 (1.01-1.62)	0.00 (0.02-2.49)	6.00 (4.30-6.81)
Test value	KW= 5.666 p= 0.129	KW= 12.380 p= 0.006	KW= 11.291 p= 0.010	KW= 1.208 p= 0.751	KW= 10.420 p= 0.015
Incontinence status					
Yes	2.00 (1.92-2.90)	2.00 (1.59-2.61)	2.00 (1.26-1.76)	0.00 (0.11-0.33)	6.50 (5.34-7.17)
No	2.00 (1.62-2.31)	2.00 (1.96-2.69)	2.00 (1.31-1.65)	0.00 (0.09-0.22)	5.00 (5.18-6.67)
Test value	U= 2986.000 p= 0.085	U= 3336.000 p= 0.528	U= 3514.500 p= 0.935	U= 3296.000 p= 0.263	U= 3209.00 p= 0.312

KW= Kruskal Wallis Test, U= Mann Whitney U Test, CAM= Complementary and Alternative Medicine

Sexual contact, no micturition, the use of spermicidal gel, the use of diaphragm, pregnancy, low socioeconomic status, diabetes, sexually transmitted infections, vaginal douching, daily use of pads, hygienic behavior and history of recurrent infection are risk factors for UTIs in women.^[16,17] In this study, approximately half of the women diagnosed with UTIs were primary school graduates, 61.1% were housewives and 70.6% were married. When the hygiene behaviors of the participants were examined it was found that only 36.7% of the participants washed their hands before and after going to the toilet, 56.7% cleaning from front to back, 10% had Sexually Transmitted Diseases (STDs), and 51.1% performed vaginal douching. UTI diagnosis was high in housewives, in those with low education level, in those who washed their hands only after leaving the toilet, in those who washed from back to front in those who performed vaginal douching, in those who do not pay attention to the choice of underwear, and in those who have chronic disease and urinary incontinence.

According to the latest studies in UTI management, it has been reported that the use of Chinese herbal medicines alone or with medicines are beneficial. It was also reported that it prevented infections, which were recurrent at least six months later.^[18] Almost all of the women participated in the study stated that they used a CAM method for UTI (92.8%) and 97.8% of them expressed that the method was effective. It was determined that women did not only use biological methods. The most commonly used herbal methods were parsley, rosehip, green tea, nettle, linden, thyme and chamomile; dietary methods were yogurt, milk and dairy products, honey, pomegranate, garlic; religious methods were prayers and the psychological approach was exercise. It was determined that they did not prefer only biological methods. In the last review studies, 4 alternative approaches other than drugs were recommended. These were cornelian cherry, prebiotic, Chinese herbal medicine and D-mannose. It has been emphasized that prebiotics are not very effective when mixed with placebo or when used alone. It was also reported that the efficacy was high with medical treatment.^[19] Some of the fruit juices used have been reported to be effective. Especially the use of bilberry for a long time was reported to be effective in reducing UTI complaints. The use of cornelian cherry juice for 12 months was reported to reduce the frequency of UTI and to be effective for the regression of symptoms.^[20]

It is recommended to use CAM methods especially to prevent recurrent infections, to increase the effectiveness of treatment, to reduce the side effects and the treatment costs. There are many uses of CAM in some countries and the studies about endemic methods continue. For example, traditional methods are commonly used in China to treat various pathologies, including chronic and refractory infectious diseases.^[21] 33 women with more than 3 UTIs per year were included in a study. Annual UTI incidence of the women was determined as 6.6 + 2.5. 4 weeks-treatment consisting of 10 plants (Rhizoma Anemarrhenae, Cortex Phellodendri

Chinensis, Angelica sinensis, Rehmannia glutinosa, Libosch, Wolfiporiacocos, Salvia miltiorrhiza, Rhubarb, Polygonum aviculare L., Dianthus superbus, and Talcum) was applied to women who were resistant to at least 8 antibiotics. After 2 weeks, 25 patients (73.52%) experienced significant symptomatic relief; in 4 weeks, 30 patients (88.23%) recovered; and 3 patients (7.5%) did not come around. Recurrence was observed in only 4 (11.76%) of the patients recovered after 6 months of follow-up and this rate was indicated to be a much lower than the antibiotic treatment. No adverse effects were reported among these cases.^[22] In the study, it was found that almost all of the women used CAM. In particular, various herbal and dietary sources were preferred. The vast majority of women drunk parsley and rosehip juice, and consumed milk, milk products and yoghurt. Staying hydrated and warm applications were also used to cope. In a study, many methods were recommended for UTIs as well as the elimination of many ailments. Staying hydrated, sweet juicy fruit (grape, pear, plum, mango, melon, apple), pumpkin, yellow squash, cucumber, organic food were recommended to be eaten.^[23]

In this study, the use of the CAM method was more common in; housewives, those who have a high educational level and perform vaginal douching, those with a chronic disease and incontinence. In addition, the use of the CAM method was less in those who were diagnosed with more than three UTIs in a year.

CONCLUSIONS

As a result of the research; genital hygiene behaviors were determined to affect the frequency of UTI diagnosis. Almost all women with UTIs use a CAM method (%92.8). It was found that the women with UTIs especially preferred; parsley, rosehip, green tea, nettle, linden, thyme and chamomile as herbal methods; yogurt, milk and dairy products, honey, pomegranate, garlic as dietary methods; prayers as religious methods and exercise as psychological approach. Almost all women using the method stated that the method was effective (97.8%).

It is necessary to prevent UTIs to reduce health cost and improve women's quality of life. It is very important to raise awareness for improper practices. Women's CAM methods and their effects on health must be researched. It is recommended to determine the methods varying by countries and regions and to carry out comprehensive researches.

ETHICAL DECLARATIONS

Ethics Committee Approval: The study was carried out with the permission of the Scientific Research and Publication Board of Gümüşhane University (Number=95674917-604.01.02).

Informed Consent: The study was conducted on a voluntary basis. Verbal consent was obtained from the participants.

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