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A STUDY ON THE FREQUENCY OF COMMON SYMPTOMS OF HUMORS EXCESS AND UTERINE TEMPERAMENT IN PATIENTS WITH OLIGOMENORRHEA

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Abstract:

Background: *Oligomenorrhea is one of the most common menstrual disorders in women at reproductive age with different complications. Oligomenorrhea is referred to as "Ehtebas-e Tams" in the Persian medicine (Iranian Traditional Medicine). In Iranian Traditional Medicine (ITM) textbooks, temperament (Mizaj) and humors have an important role in diagnosis and treatment of diseases. Since the humors excess is one of the causes of Ehtebas-e Tams, this study examined the frequency of common symptoms of humors excess and uterine temperament in these patients.*

Materials and Methods: *This research is a descriptive case study. One-hundred fifty women aged 18-45 years suffering from oligomenorrhea who referred to midwifery clinic during 2013-2015 were selected through convenience sampling method. In addition to the patients' demographic characteristics form, a uterine temperament questionnaire and humors excess checklist were completed.*

Results: *The mean age of the patients was 24.6±5.1 years. The majority of married patients, had a cold (66.1%, 74 patients) and wet (62.5%, 70 patients) uterine temperament. The most common symptoms of humors excess in patients were related to black bile (61.25%) and phlegm (59.28%). Severe anger, worry about future, and excessive thinking were the most common symptoms of black bile and body coldness, drowsiness after eating, and excessive sleeping were the most common symptoms of phlegm.*

Conclusion: *According to the results of this study, and observing the prevalence of symptoms of humors excess in patients with oligomenorrhea, it is suggested that other studies be conducted to determine the standard questionnaire of the humors excess and distemperament in these patients.*

Keywords: *Oligomenorrhea, Iranian traditional medicine, Temperament, Humors.*

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INTRODUCTION:

Normal menstruation is the periodic loss of secretory endometrium of the uterus caused by reduced production of estradiol and progesterone due to the regression of corpus luteum. Sudden discontinuation of sex steroids causes severe spasticity in spiral arteries and ultimately endometrial ischemia and the loss of this layer [1, 2]. Oligomenorrhea occurs when the distance between menstrual cycles lasts longer than 36 days or the number of cycles is totally 5-7 cycles per year [3, 4]. Common causes of oligomenorrhea can be divided into physiological positions (pregnancy and lactation), anatomical disorders (cervical stenosis, and Acherman syndrome), ovarian dysfunction (initial ovarian failure), hypothalamic-pituitary disorder, and abnormal GnRH secretion from the hypothalamus [5]. Oligomenorrhea treatment includes hormonal pills. The side effects of these pills include nausea, headache, acne, cardiovascular events, thromboembolism, cholestasis, gallbladder disease, stroke, cancer, etc. [2, 6]. Due to the increase in the prevalence of obesity and immobility, improper nutritional habits, stress, changes in lifestyle, etc., menstrual disorders and oligomenorrhea have been increasing in recent decades [7].

Over the past decades, the use of traditional and complementary medicines has increased in many countries [8]. Persian medicine (Iranian traditional medicine), including the knowledge and practices used in the prevention, diagnosis and elimination of the diseases in Iran from ancient to today [9].

According to the scholars of Iranian traditional medicine (ITM), the natural and regular menstruation (Tams) in women represents indicates their complete health [10-12]. Reduction of menstrual bleeding as complete cessation of menstruation, decrease of the amount of bleeding during menstruation, and increase of the menstrual intervals are referred to as "Ehtebas-e Tams" in ITM [11]. Recognition of temperament (Mizaj) plays an important role in the diagnosis and treatment of diseases in ITM. Distemperament (Sue-mizaj) occurs when the temperament of an organ or the body away from the normal temperament. In ITM, the diagnosis of the diseases is based on the distemperament. Distemperament is divided into two categories: material and immaterial (simple) distemperament [10]. Material distemperament (humors excess) is caused by the increase of one of the four humors including blood (Dam), yellow bile (Safra), phlegm (Balgham), and black bile (Sauda) [13]. Oligomenorrhea might be caused by uterus or whole body distemperament. One of the most important causes of oligomenorrhea is humors excess in the body [10]. Regarding the high prevalence of oligomenorrhea and its importance on the health, socioeconomic status and quality of life of these patients, the diagnosis and treatment of this disorder is highly important [14-16]. This study aimed to investigate the frequency of common symptoms of humors excess and uterine temperament in patients with oligomenorrhea from the perspective of ITM.

MATERIALS AND METHODS:

This is a descriptive case study research. Women in reproductive age with oligomenorrhea who referred to midwifery clinic during December 2013 to April 2015 were selected through convenience sampling method. Systemic diseases such as diabetes mellitus, Cushing's syndrome, congenital adrenal hyperplasia, hyperprolactinemia, hyperthyroidism, hypertension, and cases such as pregnancy, abortion or recent postpartum, lactation, use of hormonal medications in the recent month, and patient dissatisfaction for entry into research were considered as exclusion criteria in the study. Consequently, 150 women aged 18-45 years with oligomenorrhea entered the study with personal consent. For ethical considerations, necessary explanations were given about the study to patients. Personal information of the patients was kept confidential.

Data collection

At the baseline, demographic characteristics form including age, occupation, education, and marital status was completed by the researcher.

Uterine temperament questionnaire

Uterine temperament was determined using uterine temperament questionnaire [17]. Given that the questionnaire has been designed to determine uterine temperament in married women, uterine temperament in married patients was determined. According to this 12-item questionnaire, 9 questions are related to the warmth and coldness of the uterine temperament, scored from 9 to 63. The higher is the score, the warmer is the uterine temperament (moderate: 36). Moreover, there are 3 questions about wetness and dryness of uterine temperament scored from 3 to 21. The higher is the score, the wetter is the uterine temperament (moderate: 12) [18].

Preparation of the checklist of humors excess symptoms

Since there is no standard questionnaire for the study of humors excess, in order to determine the symptoms of humors excess in patients with oligomenorrhea, the textbooks of ITM, including

Avicenna's Canon, Kholasat al-Hekmah, Exir-e A'zam, Zakhire-ye Kharazmshahi [10-12, 19], etc. were reviewed and the symptoms of humors excess were extracted from them. On the basis of these symptoms, a form (symptoms checklist) was prepared by the researcher. Accordingly, a list of common symptoms of humors excess was prepared including 12 symptoms of blood excess, 6 symptoms of yellow bile excess, 15 symptoms of black bile excess, and 7 symptoms of phlegm excess (Table 2-6). Furthermore, a group of symptoms that are not emphasized as specific humor excess in textbooks but exist in various humors excess were examined under the title of "general symptoms" of humors excess. The primary form was modified several times with expert opinion. In order to score the questions, a point was assigned to each symptom. Definitely, the value of some symptoms for determining humors excess is more than the other symptoms; however, due to lack of qualitative scoring for the symptoms in ITM books, it was not possible to evaluate the symptoms qualitatively in the form.

Data Analysis

After extracting the data, they were analyzed by SPSS software, version 16, and the frequency of symptoms was evaluated. Since the symptoms of each humor excess were different, in order to compare the number of symptoms of each humor excess with other ones, the mean ratio of the number of symptoms to the total number of each humor excess was obtained and their percentage was calculated [20].

RESULTS:

The patients under study were 150 participants suffering from oligomenorrhea with the average age of 24.6±5.1. 67 patients (44.7%) had academic education, 63 patients (42%) had diploma, and 20 patients (13.3%) had middle school or lower degrees. 38 patients (25.3%) were single and 112 patients (74.7%) were married. In the review of their occupations, the highest numbers of patients, 79 patients (52.7%) were housewives, 55 patients (36.6%) were high school and university students and 16 patients (10.7%) had other jobs.

Uterine Temperament

In examining uterine temperament in terms of warmness and coldness, the majority of patients (74 patients, 66.1%) had cold uterine temperament. In examining uterine temperament in terms of wetness and dryness, the majority of them (70 patients, 62.5%) had wet uterine temperament. The absolute and relative frequency of uterine temperament can be seen in Table 1.

Table 1: Absolute and relative frequency of uterine temperament in patients with oligomenorrhea

Uterine temperament	Number of patients	Percent of patients
Cold	74	66.1
Moderate	14	12.5
Hot	24	21.4
Wet	70	62.5
Moderate	22	19.6
Dry	20	17.9
Total patients	112	100

Symptoms of humors excess

In examining the frequency of the symptoms of humors excess in the total number of patients, 127 patients (84.7%) were complaining about severe anger. Concerns about future (84%), high stress (83.3%), excessive thinking (83.3%), disquiet and restlessness (78.7%) were the other most common symptoms complained by the patients. These symptoms are often found on the list of black bile excess. In addition, 119 patients (79.3%) were complaining about unexplained fatigue and 114 patients (76%) about coldness of body.

Among the symptoms associated with humor excess of blood (Dam), yawning was the most common symptom in the patients (84%). The symptoms of blood (Dam) excess are displayed in Table 2 in terms of absolute and relative frequency, respectively.

Table 2: Frequency distribution of symptoms of blood excess in 150 patients with oligomenorrhea

Symptoms of blood (dam) excess	Absolute frequency	Relative frequency (%)
Yawning	126	84
Unexplained fatigue	119	79.3
Stretching body	103	68.7
Feeling heavy in whole body	96	64
Decrease of memory	93	62
Feeling heavy in the head	85	56.7
Taking nap	67	44.7
Nausea	63	42
Feeling sweet taste in mouth	35	23.3
Feeling heavy in the corner of eyes	34	22.7
Gum and nose bleeding	26	17.3
Itching the place of phlebotomy or cupping	25	16.3

Among the symptoms associated with humor excess of yellow bile (Safra), enjoying cool air was the most common symptom (84%). The symptoms of bile excess are displayed in Table 3 in terms of absolute and relative frequency, respectively.

Table 3: Frequency distribution of symptoms of yellow bile excess in 150 patients with oligomenorrhea

Symptoms of yellow bile (Safra) excess	Absolute frequency	Relative frequency (%)
Enjoying cool air	126	84
Thirst	108	72
Feeling needle in body	81	54
Mouth dryness	70	46.7
Feeling bitter taste in mouth	69	46
Nasal dryness	53	35.3

In the study of symptoms associated with humor excess of phlegm (Balgham), body coldness was the most common symptom (76%), and then drowsiness after meal (74.7%) and much sleep (73.3%). The symptoms of phlegm excess are displayed in Table 4 in terms of absolute and relative frequency, respectively.

Table 4: Frequency distribution of symptoms of phlegm excess in 150 patients with oligomenorrhea

Symptoms of phlegm (Balgham) excess	Absolute frequency	Relative frequency (%)
Body coldness	114	76
Drowsiness after meal	112	74.7
Much sleep	110	73.3
Lots of saliva	98	65.3
Slow digest	77	51.3
Foamy saliva	58	38.7
Sour burp	54	36

Among the symptoms of humor excess of black bile (Sauda), severe anger was the most common symptom (84.7%) and then concern about future (84%) and excessive thinking (83.3%), respectively. the frequency of the symptoms of black bile excess is displayed in Table 5.

Table 5: Frequency distribution of symptoms of black bile excess in 150 patients with oligomenorrhea

Symptoms of black bile (Sauda) excess	Absolute frequency	Relative frequency (%)
Severe anger	127	84.7
Concerns about future	126	84
Excessive thinking	125	83.3
Disquiet and restlessness	118	78.7
disturbing thoughts	114	76
Discomfort from the past	108	72
Fear	97	64.7
Bad guesses	94	62.7
Skin dryness	86	57.3
Eating a little food and repeat	85	56.7
Seclusion	82	54.7
Insomnia	76	50.7
Heartburn	73	48.7
Obsession	66	44
Sour taste in mouth	36	24

Among the general symptoms of humors excess, heavy stress was the most common symptom in patients with oligomenorrhea (83.3%). Frequency distribution of the general symptoms of humors excess is shown in Table 6.

Table 6: Frequency distribution of general symptoms of humors excess in 150 patients with oligomenorrhea

General symptoms of humors excess	Absolute frequency	Relative frequency (%)
Heavy stress	125	83.3
Hair loss	119	79.3
Abdominal cramp	109	72.2
Stomach bloating and belching	108	72
Excessive gas passage	91	60.7
Difficulty falling asleep	95	63.3
Incomplete disposing of stool	77	51.3
Constipation	74	49.3
Post nasal drip	67	44.7
Hoarseness	64	42.7
Diarrhea and loose stool	60	40
White hair	56	37.3

In the study of humors excess in patients with oligomenorrhea, the symptoms of cold humors including black bile (61.25%) and phlegm (59.28%) were more common than symptoms of warm humors. The average frequency of symptoms of humors excess symptoms is displayed in Diagram 1.

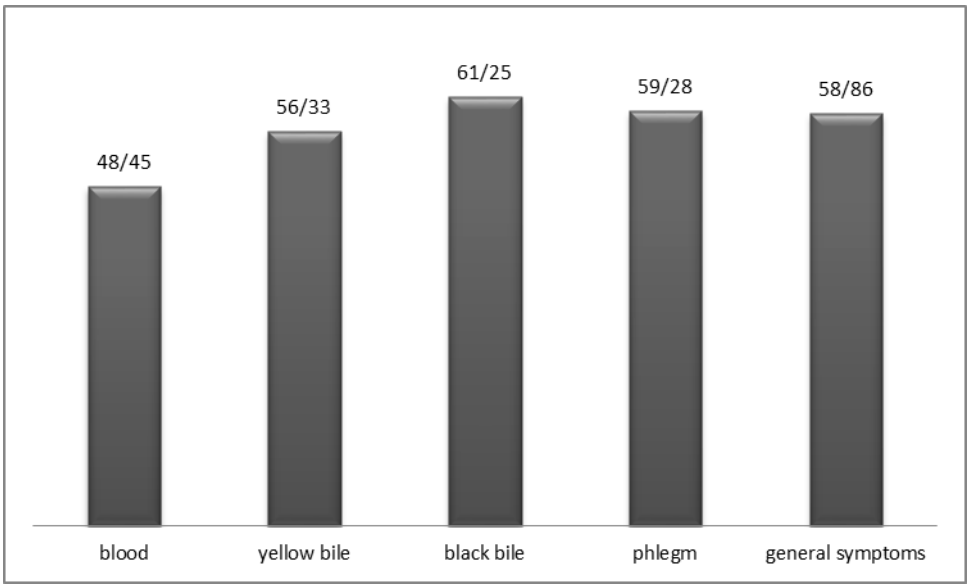

Diagram 1: Average percentage of common symptoms of humors excess in 150 patioents with oligomenorrhea

DISCUSSION:

In Iranian traditional medicine (ITM) books, the causes of oligomenorrhea (Ehtebas-e Tams) are classified into two categories: blood and uterine causes. Uterine causes include structural (anatomical) and nonstructural (functional) causes. Uterine distemperament is one of the functional causes of oligomenorrhea [21]. In this article, blood causes (humors excess) and functional causes of uterine temperament have been investigated in patients with oligomenorrhea. The study found that most patients with oligomenorrhea had cold and wet uterine temperament. In the study of symptoms of humors excess, the most common symptoms were related to balck bile and phlegm excess. The study of uterine temperament showed that 66.1% of the patients had clod uterus and 62.5% had wet uterus. The findings are consistent with the study conducted by Sohrabvand et al., where the most common uterine temperament in infertile women was the cold and wet temperament [17]. In ITM books, it is also mentioned that cold uterine temperament can lead to Ehtebas-e Tams. Since cold uterine temperament cuases the concentration of uterine blood, as well as the stenosis and compression of the uterine vessels, blood does not flow in the small vessels of the uterus; consequently, the outflow of blood from uterine vessels and uterine bleeding will be disturbed [22].

In the study of humors excess in patients with oligomenorrhea, the most common symptoms were related to black bile (61.25%) and phlegm (59.28%) excess, respectively. In the study conducted by Jafari et al., the highest material distemperaments in the patienst with oligomenorrhea were phlegm (39%) and black bile (24%) distemperaments [20]. It can be observed that in both studies, symptoms of cold distemperament are more common in women with oligomenorrhea. In ITM books it is mentioned that the most common cause of Ehtebas-e Tams is the thickening of the blood. In oligomenorrhea, lack of excretion of wastes through menstruation results in the release of waste materials of Tams in the body. This reduces the natural heat and prevents it from spreading in the body and the body temperament tends to get cold and wet [10]. On the other hand, the coldness of body temperament with phlegm and blck bile makes the blood thicken and consequently the outflow of menstrual blood is impossible or hardly done due to high concentration [21]. Moreover, in some cases too much coldness causes thickening of phlegm humors and thus the temperament inclines towards black bile [10].

People with phlegm temperament are usually obese because of the coldness and wetness of body [13], while in black bile excess, the person is thin due to dry temperament [19]. Therefore, In ITM books, excessive weight loss and obesity are both expressed as the causes of Ehtebas-e Tams [10]. Recent studies have also shown that although a large percentage of patients with oligomenorrhea are overweight and obese [2, 23], thin people also suffer from oligomenorrhoea [24].

In blood excess, the thickening of the blood prevents its flow in the uterine vessels and leads to Ehtebas-e Tams [22]. Yawning, unexplained fatigue, body stretching, and feeling of heaviness in the body were

the most common symptoms of blood excess in patients. In blood excess, the filling of body muscles with vapor and the nature movement to remove it lead to yawning and body stretching [10, 25].

The most repeatable symptoms of yellow bile excess were the pleasure of cool air and thirst. Given that the yellow bile is hot and dry and the majority of our patients were in their youth when their age temperament was hot and dry too [19], the presence of yellow bile excess symptoms in those patients is justified. In patients with oligomenorrhea, due to lack of blood loss, symptoms due to heat such as enjoying cool air and thirst can be seen.

Coldness of body and post-meal drowsiness were the most common symptoms of phlegm excess. The coldness of body in phlegm excess is due to the cold temperament of phlegm. The increase of sleep in phlegm excess is due to the increase of wetness content along with the cold. Moreover, digestion weakens in phlegm excess and weakness of digestion causes drowsiness after meals [13].

Excessive anger, concern about future, and excessive thinking were the most common symptoms of black bile excess. Emotional symptoms such as excessive thinking, being sad, and being afraid of everything are the common symptoms of black bile excess [26].

A study on women with polycystic ovary syndrome showed that the prevalence of mental disorders like depression, bipolar mood disorders and anxiety was higher in such women than those in the control group [27, 28]. Moreover, increased activity of the sympathetic system and an imbalance in the functioning of the autonomic system can be seen in these women [29, 30]. Dysfunction of the autonomic system and stress hormones can play a role in the formation of oligomenorrhea, digestive disorders, chronic fatigue and mental illnesses such as depression [31].

In the study conducted by Jafari et al., facial color, pulse and urine color were introduced as the most important signs of distemperament [20]. In the present study, clinical signs of the patients were not evaluated, only their self-expressing symptoms and complaints were filled by researcher as checklist. The sample size (150 participants) in this study was higher than the study conducted by Jafari et al. (69 participants).

Indices determining distemperament are usually qualitative in traditional medicine and there in no standard checklist or questionnaire in this regard. Repeatable symptoms appear to be more important in determining humors excess in patients with oligomenorrhea and must have higher scores in setting humors excess questionnaire. Therefore, this study could not determine with certainty the most important symptoms of humors excess in patients with oligomenorrhea, but obtaining the frequency of humors excess symptoms in this study can contribute to preparing a standard questionnaire in subsequent studies.

CONCLUSION:

Regarding the importance of determining temperament and humors excess in the diagnosis and treatment of diseases in the ITM, it is suggested that other studies be conducted to determine the standard questionnaire of the humors excess and distemperament in patients with oligomenorrhea.

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CONFLICT OF INTEREST:

The authors state that there is no conflict of interest.

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