Case Report

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# A Case of Pregnancy Following Treatment of Ovarian Failure with Persian Medicine: A Case Report

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## ABSTRACT

**BACKGROUND AND OBJECTIVE:** Premature ovarian failure, with a prevalence of 1% in women under the age of 40, leads to serious health problems for women of childbearing age. Since the causes are not fully understood and the available treatments are associated with side effects, complementary medicine, including Persian medicine, can be helpful. The aim of this study was to report a case of pregnancy following successful treatment of premature ovarian failure.

**CASE REPORT:** The patient was a 38-year-old woman with a history of 16 months of amenorrhea who had atrophic ovaries on ultrasound. Due to increased gonadotropins, decreased estradiol and anti-mullerian hormone, the gynecologist diagnosed premature ovarian failure. After referring to the Persian Medicine Clinic and after getting a history and examination, her treatment started which included lifestyle modification and medication (2 Raha capsules every 12 hours, 2 tablespoons of Sekanjabin-e-Bazoori [oxymel] a day, decoction of Chamomile and Pennyroyal 200 cc per day and Abzan [a human-sized container filled with hot water] with four plants of Hollyhocks, Chamomile, Rose, and Mallow twice a week). The patient was followed for 18 months. Menstruation occurred after 3 months and the ovaries were normal size after 8 months on the second ultrasound and 10 months after starting treatment, the patient became pregnant and the result was a healthy male baby.

**CONCLUSION:** According to the results of the present study, Persian medicine can be effective in treating infertility caused by premature ovarian failure.

**KEY WORDS:** *Case Report, Persian Medicine, Premature Ovarian Failure*.

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## Introduction

Premature ovarian failure is defined by amenorrhea, infertility, increased gonadotropins, and shrinkage of ovaries in women under 40 years of age, leading to serious complications such as ischemic heart disease, autoimmunity, osteoporosis, and ultimately increased mortality (1). Its prevalence is 1% (2) and various causes have been suggested for it, but in 90% of cases, the cause is unknown (3). Today, hormonal drugs are prescribed to treat menopausal complications such as hot flashes and dry genitourinary tract (4). However, due to complications such as cardiovascular events (coronary heart disease, hypertension and stroke) and breast cancer, the use of these drugs has become limited (5). In the reference books of Persian medicine, such as "The Canon of Medicine", the phrase "menstrual retention" refers to complete cessation or reduction of menstrual bleeding or reduction of menstrual days, which is one of the important causes of infertility in Persian medicine and various treatments has been mentioned (6). The aim of this study was to report a case of normal pregnancy following successful treatment of premature ovarian failure with Persian medicine.

## Case Report

The patient was a 38-year-old woman with a 7-year-old daughter. She was a midwife and lived in Arak, Iran. Results of treatment of this patient is presented with her informed consent and with the ethics code 1399.246. IR.ARAKMU.REC. The patient with major complaints of infertility and amenorrhea referred to a gynecologist for 16 months and underwent tests and ultrasounds of the uterus and ovaries, the results of which were as follows: anti-mullerian hormone equal to 0.03 ng/ml, estradiol equal to 7.72 pg/ml, luteinizing hormone equal to 20.9 mIU/ml and follicle stimulating hormone equal to 90 mIU/ml. Other hormonal tests were normal. Ultrasound examination of the ovaries showed that both ovaries were atrophic and smaller than normal (right ovary size 16×9 mm and left ovary size 18×8 mm) and follicular activity was not seen in any of the ovaries (Figure 1).

Atrophic ovarian failure was diagnosed due to increased levels of follicle-stimulating hormone and decreased lutein and anti-mullerian hormones and atrophic ovaries, and replacement therapy with estrogen and progesterone was recommended by the gynecologist. Based on history and physical examination, the patient was slightly irritated and vaginal dryness was evident and the body mass index was normal. In this patient, lifestyle modification was performed with proper exercise, avoidance of stress and avoidance of foods such as convenience food and veal. Her medication included 2 Raha capsules every 12 hours, 2 tablespoons of Sekanjabin-e-Bazoori a day, decoction of Chamomile and Pennyroyal 200 cc per day and Abzan [a human-sized container filled with hot water] with four plants of Hollyhocks, Chamomile, Rose, and Mallow twice a week. The patient was instructed to chop the plants and boil them in water, then pass through a strainer and leave it for 20 minutes while it is still hot, doing so twice a week (Tables 1-4).

The patient was followed for 18 months. Menstrual bleeding occurred after 3 months and the ovaries returned to normal after 8 months on the second ultrasound (Figure 2). The patient became pregnant naturally 10 months after starting treatment and the result was a healthy and mature boy.

**Figure 1. Ultrasound image before treatment**

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**Table 1. Raha capsules**

| Scientific name of the plant | Dosage (mg) | Therapeutic effects in modern medicine | Used part of the plant | Therapeutic effects of the plant in Persian medicine |
|---|---|---|---|---|
| Foeniculum vulgare | 166 | Effective in the treatment of oligomenorrhea and amenorrhea (7) | Seed | Activation of ovaries and increase of sexual desire and improvement of menopausal symptoms (8) |
| Daucus carota | 166 | Antioxidant and induction of menstruation (8) | Seed | Activation of ovaries and increase of sexual desire and improvement of menopausal symptoms (8) |
| Vitex agnuscastus | 166 | Treatment of menstrual irregularities and amenorrhea (8) | Fruit | Activation of ovaries and increase of sexual desire and improvement of menopausal symptoms (8) |

**Table 2. Sekanjabin-e-Bazoori [oxymel]**

| Scientific name of the plant | Dosage in 5 cc | Therapeutic effects in modern medicine | Used part of the plant | Therapeutic effects of the plant in Persian medicine |
|---|---|---|---|---|
| Apium graveolens | 12 | Analgesic, anti-inflammatory, antioxidant, antihypertensive, anti-lipid, anti-diabetic, liver protection and fertility aid (9) | Seed | Relieving biliary obstruction and cleansing the stomach and treating ascites (10) |
| Cucumis melo | 12 | Diuretics, antispasmodics and the treatment of urinary tract ulcers (11) | Seed | Relieving biliary obstruction and cleansing the stomach and treating ascites (10) |
| Foeniculum vulgare | 12 | Effective in the treatment of oliguria and amenorrhea (7), Effective in anti-androgen (12), Estrogenic effects (13), Vasodilation (14) | Seed or bark | Relieving biliary obstruction and cleansing the stomach and treating ascites (10) |
| Cichorium intybus | 18 mg seed and 6 mg bark | Immunostimulatory, probiotics, liver protection, antibacterial activity (15) | Seed or bark | Relieving biliary obstruction and cleansing the stomach and treating ascites (10) |
| Cucumis sativus | 6 | Control of inflammation, oxidative stress, hyperglycemia and hyperlipidemia (16) | Seed | Relieving biliary obstruction and cleansing the stomach and treating ascites (10) |
| Pimpinella anisum | 12 | Regulation of the menstrual cycle and reduction of luteinizing hormone in polycystic ovary syndrome in oligomenorrhea (17), vasodilation (18) | Seed | Relieving biliary obstruction and cleansing the stomach and treating ascites (10) |

**Table 3. Abzan [human-sized container filled with hot water]**

| Scientific name of the plant | Dosage (gram) | Therapeutic effects in modern medicine | Used part of the plant |
|---|---|---|---|
| Malva sylvestris | 100 | Facilitation of labor, menstrual regulation, effective in pelvic pain, cervical ulcer, endometrial inflammation and menorrhagia orally, vaginally, or by Abzan (19) | Flower |
| Rosa domestica | 100 | Gram-positive and gram-negative antibacterial, anti-inflammatory, primary dysmenorrhea (20) | Flower |
| Malvasylvestris | 100 | Antibacterial, antifungal, wound healing, anti-inflammatory, antioxidant (21) | Flower |
| Marticariachamomilla | 100 | Antioxidant, anti-cancer, anti-inflammatory and anti-osteoporotic activities (22) | Flower |

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**Table 4. Herbal decoction**

| Scientific name of the plant | Dosage | Therapeutic effects in modern medicine | Used part of the plant |
|---|---|---|---|
| Menta pulegium | Two tablespoons a day | Menstrual regulation (23) | Leaf |
| Marticariachamomilla | Two tablespoons a day | Antioxidant, anti-cancer, anti-inflammatory and osteoporosis prevention activities (22) | Flower |

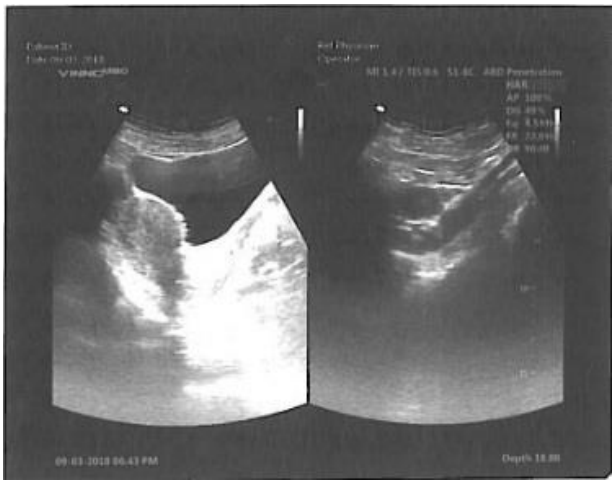

**Figure 2. Ultrasound image after treatment**

## Discussion

This study reports the first case of successful treatment of infertility caused by premature ovarian failure with Persian medicine. In the study of Bakhtiari et al., the most common causes of infertility were ovarian-related reasons, and decrease in the level of anti-mullerian hormone secreted by the granulosa cells of the ovarian follicles is the first indicator of a decrease in ovarian reserve and indicates the quantity and quality of follicles (24). In a study by Steiner et al., fertility decreased in women over 30 years of age and with very low levels of the anti-mullerian hormone (<0.07 ng/ml) (25). From the perspective of Persian medicine, natural menstruation occurs as a result of the proper functioning of the reproductive system and its relationship with other organs, the most important of which are the heart, liver, brain and stomach, and amenorrhea leads to complications such as headache, indigestion, anorexia and bad mood (14). The patient was a 38-year-old woman with atrophy of the ovaries and very low levels of anti-mullerian hormone (0.04 ng/ml) and according to the study of Steiner et al., had a low chance of pregnancy (25). For the treatment of amenorrhea (amenorrhea is described as “menstrual retention” in Persian medicine) in this patient based on Persian medicine sources, plants such as Foeniculum vulgare and Pimpinella anisum were prescribed, which in modern studies have estrogenic, progesterone and anti-androgenic effects, and can play a role in the regulation of sex hormones. On the other hand, due to the role of other organs, including the liver, in Persian medicine, plants such as chicory and celery have been used, which has also been prescribed for the patient in this study. Today, the protective effects on the liver by medicinal plants such as chicory and celery are well known. In Persian medicine, the proper functioning of the body organs is the result of the production of four humors of blood, phlegm, bile, soda, and the natural production of these humors is the result of natural digestion of food, especially in the two organs of the liver and stomach. Since one of the causes of amenorrhea is the production of abnormal humors due to digestive disorders (26), it can be said that the administration of plants such as cucumber and celery that improve sugar and fat metabolism has been in this direction.

Patients with premature ovarian failure develop problems such as osteoporosis and high blood pressure, and herbs such as Chamomile, Foeniculum vulgare and Pimpinella anisum prevent these complications. According to Persian medicine, as in the study of Vakilinia et al., in addition to oral administration of drugs, in order to achieve better treatment results, medicinal plants were also used as Abzan [human-sized container filled with hot water], which were also used in the present study (27). In general, with amenorrhea treatment strategies based on Persian medicine, the patient was treated and the patient became pregnant naturally and the result of the pregnancy was a healthy and mature boy.

**Conflict of interest:** There is no conflict of interest between the authors.

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