

**TREATMENT OF POLYCYSTIC OVARIAN SYNDROME (MARZ AKYAS KHUSYATUR REHM)
BY CUPPING THERAPY (HIJAMA) IN THE LIGHT OF UNANI SYSTEM OF
MEDICINE-A REVIEW****Dr. Fouzia Farooqui^{1*}, Dr. S. Saleemunnisa Yousuff², Dr. Asma R. A. Chaudhary³, Dr. Asif Ali Ghulam
Mohammed Chaudhary⁴ and Dr. Tanzim Sayyad Hasan Kadiri⁵**¹Associate Professor, Dept. of Ilaj-bit-Tadbeer, ZVM Unani Medical & Hospital, Pune.²Assistant Professor, Dept. of Tahaffuzi-wa-Samaji Tib, ZVM Unani Medical & Hospital, Pune³Professor, Dept. of Ilmul Qabalat wa Amraz e Niswan, ZVM Unani Medical & Hospital, Pune.⁴Assistant Professor, Dept. of Moalijat, Dr. M. I. J. Tibbia Unani medical college & Hospital, Mumbai.⁵Associate Professor, Dept. of Ilaj-bit-Tadbeer, Dr. M. I. J. Tibbia Unani medical college & Hospital, Mumbai.***Corresponding Author: Dr. Fouzia Farooqui**

Associate Professor, Dept. of Ilaj-bit-Tadbeer, ZVM Unani Medical & Hospital, Pune.

Article Received on 06/12/2023

Article Revised on 26/12/2023

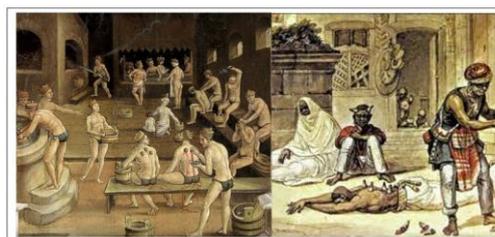
Article Accepted on 16/01/2024

ABSTRACT

Polycystic Ovarian Syndrome (PCOS) is the commonest endocrinopathy along with women of reproductive age with a ballpark prevalence of about 4 to 12%. It is an enduring multisystem genetic disorder and is traditionally first noticed in puberty as menstrual irregularities and weight gain. The management of PCOS is bounded by many controversies. The option of treatment depends upon the symptoms the patient presents with. There is a capacity for alternative management of the disease. In Unani system of Medicine Polycystic Ovarian Syndrome is mentioned under the headings of Amenorrhea, Obesity and other phlegmatic disorders. (Eminent Unani physicians have attributed Marz Akyas Khusyatur Rehm (Polycystic Ovarian Syndrome) with Clinical features like amenorrhea, obesity, oligomenohoea as phlegmatic disorder). Zakaria Razi (860-925AD) described that women with PCOS can present with the clinical features of amenorrhea, hoarseness of voice and hirutism. Unani physicians attributed Marz Akyas Khusyatur Rehm (Polycystic Ovarian Syndrome) to dominance of Balgham (phelgm). Different treatment modalities have been proposed to resume normal menstrual flow as it is considered to be the root cause of many ailments. One such mode is through Hijamah mae shurt (wet cupping therapy).

KEYWORDS: Polycystic Ovarian Syndrome, Cupping Therapy, Infertility, Pregnancy.**I. INTRODUCTION OF POLYCYSTIC
OVARIAN SYNDROME**

The Marz Akyas Khusyatur Rehm (Polycystic Ovarian Syndrome) is one of the most common causes of oligo-ovulatory infertility^[1] and it is the most common endocrinopathy affecting premenopausal women.^[2,3] It starts appearing at 15 to 25 years of age & it may take years for its clinical presentation to appear. Over all incidence of Marz Akyas Khusyatur Rehm (Polycystic Ovarian Syndrome) is 4% to 22% in women & 50% of women seen at infertility clinics.^[4,5] It is an incompletely understood enigmatic disease of heterogeneous nature. It is characterized by oligomenorrhoea, obesity, hyperandrogenism and infertility. The condition appears to have a genetic component^[6,7,8,9] and those affected often have been both male and female relatives with adult onset diabetes, obesity, elevated blood triglyceride, high blood pressure and female relative with infertility, hirsutism and menstrual problem.^[10]

**Fig. 1: Cupping in ancient Rome and Greek.**

The editors coroner of infertility and sterility (June 1995) suggested that hyperandrogenemic chronic anovulation (HCA) is the correct name for this disease as the most consistent features are hyperandrogenemia and chronic anovulation.^[11] During the reproductive years, PCOS is associated with increased morbidity including abnormal bleeding, infertility, increased pregnancy loss and other complications of pregnancy such as gestational diabetes mellitus.^[12] Women with PCOS also have an increased risk of endometrial carcinoma because of long standing

unopposed estrogen stimulation.^[13] Although PCOS is known to be associated with reproductive morbidity, diagnosis is especially important because PCOS is now thought to increase metabolic and cardiovascular risks such as atherosclerosis, coronary artery disease, myocardial infarction, these risks are strongly linked to insulin resistance and subsequent hyperinsulinemia and are compounded by the common occurrence of obesity, although insulin resistance and its associated risks are also present in non obese women.^[14,19] Women with PCOS are at increased risk of impaired glucose tolerance, type 2 diabetes mellitus and hypertension.^[20,22] Hence PCOS must be diagnosed and treated at any point of time irrespective of the desire to conceive. There is a wide spectrum of Ovarian Syndrome); these may vary from skin changes such as acne, hirsutism, or alopecia to menstrual abnormalities as dysfunctional uterine bleeding, oligomenorrhea, recurrent miscarriage and infertility. Clinically the most common symptoms associated with PCOS are menstrual irregularities (90%), hirsutism (50-80%) depending upon 5 α reductase activity in skin, infertility (75%) and obesity in approximately 50-60% of subjects. PCOS is essentially biochemical diagnosis with either hyper gonadotropic or hyperinsulinemic state, since the advent of endovaginal sonography is more practical approach to morphological diagnosis has been popular. A gradation of thecal hyperplasia has been encountered in PCOS subjects, since both LH and insulin act at the thecal compartment of ovary to cause hyper androgenemia. Moreover, the small and intermediate follicle predominate the PCOS scenario and the gradually proceed to atresia rather than the follicular dominance.^[23] These two entities namely homogenous polyfollicular enlargement and thecal hyperplasia are well definable endosonographic landmarks of PCOS ovaries. More over the state of endometrial stimulation, proliferation of hyperplasia will also be evaluated at pelvic scan. In Unani system of Medicine Polycystic Ovarian Syndrome is mentioned under the headings of Amenorrhea, Obesity and other phlegmatic disorders. (Eminent Unani physicians have attributed Marz Akyas Khusyatur Rehm (Polycystic Ovarian Syndrome) with Clinical features like amenorrhea, obesity, oligomenohoea as phlegmatic disorder). Zakaria Razi (860-925AD) described that women with PCOS can present with the clinical features of amenorrhea, hoarseness of voice and hirutism.^[24] Unani physicians attributed Marz Akyas Khusyatur Rehm (Polycystic Ovarian Syndrome) to dominance of Balgham (phelgm). Ibn-e-Rushed described that Marz Akyas Khusyatur Rehm is a disease of cold and moist nature and arises due to change in quantity and quality of balgham. Buqrat (Hippocrates), Ibn-e- Habal Bagdadi, Ali Ibn-e- Abas Majoosi , Rabban Tabri attributed PCOS due to pathology in liver (Sue Mizaj Kabid) liver dysfunction which may lead to abnormal production of Balgham (phelgm).^[25,27] Abnormal form of Balgham is divided on the basis of consistency and taste. On the basis of consistency one type is Balgham Mayi which is responsible for causing the Marz Akyas Khusyatur Rehm

(Polycystic Ovarian Syndrome). So it can be concluded that PCOS arise due to predominance of Balgham in the body which leads to the cyst formation in the ovaries, amenorrhea and obesity. Seeing on current trends, Marz Akyas Khusyatur Rehm (Polycystic Ovarian Syndrome) will become a major cause of infertility, therefore the need for an effective treatment protocol is becoming increasingly urgent. In conventional medicine treatment of PCOS is adapted according to a specific cause; goals of therapy include ameliorating hyperandrogenic symptoms by use of anti- androgen drugs, inducing ovulation, regulating menstruation and preventing cardio-metabolic complications.^[21]

A. Al-hijamah (Cupping therapy)

Cupping therapy is an effective method for extraction of harmful substances from the body. In this process specially designed cups are applied over a particular area and the negative pressure is build in. This facilitates the correction of the mehjoom (involved organ).^[10] Depending upon the scarifications, it is of two types; Hijama bila shurt (dry cupping) and Hijamah mae shurt (wet cupping).

B. Hijamah mae shurt

It is a minor surgical eliminatory procedure where negative pressure (suction force) is applied to the skin surface using cups. Scarifications of the skin uplifting opens skin barrier for the evacuation of fluids admixed with pathogenesis causing substances. Wet cupping therapy is considered as a mode of treatment where humoral imbalance is involved.^[28] For ehtebase tams multiple incisions^[25,30] are applied over the calf muscles and the blood is sucked through application of cups.

II. In-fertility and cupping Therapy

Infertility is a universal health issue and the number of infertile couples around the world is increasing.^[1] All around the world, 10% of the population, 13% of women, 10% of men, and 15% of couples of reproductive ages suffer from infertility. The prevalence of infertility in Iran has been estimated 2–5%.^[2] Infertility is an unwanted delay in conception after regular unprotected intercourse after 12 months or more. It is a complex disorder with medical, psychological, social, and economic aspects.^[3] Infertility, mental disorders, and infertility treatment are related.



Fig. 2: cupping for infertility and PCOD.

Most research indicates that the presence of psychiatric disorders in infertile women, can affect the efficacy of gynecological therapy^[4] and the main goal of infertility treatment is to increase the pregnancy rate^[5] Poly Cystic Ovarian Syndrome (PCOS) is one of the causes of infertility. PCOS is the most common endocrine and metabolic disorder among women of reproductive age.^[6,7] The prevalence of this syndrome varies from 6 to 21% worldwide and from 6.8 to 41.4% in Iran.^[8] The experience of infertility often affects many aspects of life including psychosocial, well-being, sexual and marital satisfaction, and social relationships. The WHO defines "Quality of Life" as: "individuals' perceptions of their position in life in the context of the culture and value systems in which they live".^[9,10] Infertility could activate a physiological stress response, for example by altering the regulation of sex hormone signaling leading to reduce fertility potential. Therefore, increasing anxiety and psychological distress are related to decreasing pregnancy rates.^[11] Several studies have shown that PCOS, in addition to significantly reducing the quality of life and mental health, cause limitation in playing role in physical, social, and emotional fields, increase physical pain, decreases energy, decreases sexual satisfaction, and women's identity and life dissatisfaction.^[12,13] The available evidence indicates that exercise is effective in improving health related quality of life and PCOS symptom distress, also it can improve symptoms and/or prevalence of depression and anxiety in women with PCOS.^[14] Infertile women's quality of life is an important and challenging issue^[15] so it should be considered in infertility counselling. A large body of evidence suggests that populations with higher levels of mindfulness perform better in psychological well-being.^[16] In the clinic, the treatment of PCOS is mainly based on physical symptoms and less attention is paid to negative consequences such as sexual relations, self-confidence, and social relations so these patients need more holistic treatment. Some evidence has shown, cognitive behavior therapy that includes stress management interventions can be helpful^[13], and also mindfulness-based stress reduction programs have an impact on reducing worries in women with PCOS.^[17] Mindfulness-Based Cognitive Therapy (MBCT) involves cognitive and mindfulness skills that involve teaching participants, various stress management techniques, including relaxation, yoga, and self-care techniques systematically.^[18] Evidence shows that psychological interventions on the mind and body reduce anxiety and depression and increase pregnancy chances.^[3,19,21]

Cupping is a thousand-year-old practice in many communities around the world. This ancient practice dates back to around 3300 BC and is still very common in Europe, Asia, and the Middle East, despite the advancement of modern medicine. Dry cupping involves creating a vacuum inside a cup placed on the surface of the skin using local negative pressure to promote blood flow.^[22] There is evidence that the function of the ovary and uterus is improved by performing dry cupping and It

is also a safe method for reducing the days between menstrual cycles for the management of oligomenorrhea.^[23] According to the review of the literature, it was found that complementary treatments can have a positive effect on the quality of life of infertile women and the pregnancy rate, on the other hand, no definitive treatment has been proposed for infertile women due to PCOS. Current treatment methods are time-consuming, complicated, or not cost-effective. To the best of our knowledge, there wasn't enough evidence about the effectiveness of counselling with the MBCT approach and cupping therapy on fertility quality of life and conception rate in infertile women due to PCOS. Therefore, this pilot study aimed to compare the effectiveness of dry cupping and counselling with the MBCT approach on the fertility quality of life and conception success in infertile women due to PCOS.

III. Amenorrhea and Cupping Therapy

Amenorrhea is considered as the absence of menstruation for three months in women that had regular menstruation or for six months in women with an irregular menstruation^[1] and oligomenorrhea considered as menstrual cycle takes 35-90 days.^[2] In the reproductive period, the most frequent pathologic cause of oligomenorrhea is Polycystic Ovary Syndrome (PCOS); a prevalent reproductive endocrinopathy with prevalence of 5-15% among reproductive aged women.^[3] This is a complex condition that diagnosed with irregular menstruation, hyperandrogenism and polycystic ovarian morphology.^[4] This syndrome has several none reproductive manifestations including metabolic disturbances such as diabetes, obesity and metabolic syndrome.^[5] Nowadays the key roles of insulin resistance and hyperandrogenism in pathogenesis of PCOS is well known.^[6,7] About 70% of PCOS women are insulin resistance^[8], however, the primary pitfall has not been recognized yet; as a result, there is no definite treatment option in term of cure, so treatment modalities are symptom based. Besides the lack of cure, the longtime use of this medication are not safe and is associated with several adverse effect. Because of insufficient treatment and many unwanted complications in conventional medicine, alternative medicine is noticed recently.^[9]

Persian Medicine (PM) or Iranian Traditional Medicine as Unani Medicine is one of the oldest medical paradigms in the world that is based on humoral medicine.^[10] In this form of medicine, the health is founded on equilibrium of four humors in body. If one of humors increase or decrease, disease is begun.^[11] There are many natural pathways to create this balance such as defecation, perspire and menstruation that lead to exert the waste matters from body.^[12]



Fig. 3: Amenorrhea and Cupping Therapy.

If menstruation is dropped in anyway, the overload of excreted materials can cause different disorders.^[13] In PM “Ehtebase tams” is the closest term to amenorrhea.^[14] The most distemperament that causes Ehtebas-e-tams is dominant of coldness with viscosity. This condition may create many other disorders such as obesity, fatty liver and cardiovascular diseases that may be attribute PCOS.^[15-17] In this viewpoint, there are nutritional, pharmacological and non-pharmacological intervention in management of amenorrhea. Nutritional and pharmacological intervention are described in other studies.^[17-19] Phlebotomy and wet-cupping are two important non-pharmacological curative ways that recommended.^[16] Phlebotomy (which named Fasd in PM) is an important treatment that restores the equilibrium through bleeding from veins. In this technique inappropriate humours excreted through the gap in the vessel by a sword.^[20] Wet-cupping (Hijamat in PM) is the process of using a vacuum on surface of the body, along with the use of incisions, to remove capillary blood. By this minimal procedure the harmful substances are removed.^[21-23] This study is a review about the details of wet-cupping and phlebotomy in treatment of amenorrhea (especially PCOS) in view point of Persian Medicine texts and compare with new research.

IV. PCOD & Hijama (Cupping) Therapy

Approximately one-third of women worldwide may suffer from PCOD, but it is not entirely considered a disease. Every woman has two ovaries, which release an egg simultaneously each month. The ovaries produce tiny quantities of androgens or male hormones. PCOD (Polycystic Ovarian Disease) is a medical situation in which the ovaries generate plenty of immature or partially-mature eggs, which grow into cysts. In this disorder, the ovaries typically swell and release significant levels of androgens, which may compromise a woman's overall health.

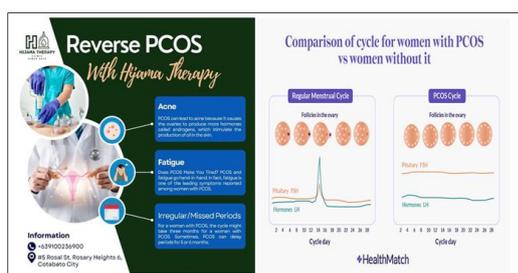


Fig. 4: comparison of cycle and Regular Cycle.

V. Causes of PCOD

In PCOD, many tiny cysts inside the ovaries fill up with fluid. Each of these has an immature egg that does not cause ovulation. The absence of ovulation causes a hormonal imbalance characterized by a large production of male hormones. The actual causes of PCOD disorder have not been identified through various research.

Certain conditions may play an important role

- Over-production of androgen (male) hormones
- Insulin resistance: Insulin hormone controls the blood sugar levels in the human body. When human cells become resistant to the action of insulin, their blood sugar level increases. As a result, the body produces an excess of insulin to control this increased blood sugar level. Excessive insulin production, in return, increases the production of androgens, which are male hormones.
- Inflammation
- Family history
- Low-grade inflammation
- Hormonal imbalances
- Being over-weight is another cause of PCOD.

VI. Signs & Symptoms of PCOD

Some women notice symptoms around the time of their first period, while others do not consider them until they have gained a lot of weight or are having difficulty getting pregnant. The most common symptoms are

- Irregular periods (Oligomenorrhea)
- Absence of periods (Amenorrhea)
- Heavy menstrual periods (Menorrhagia)
- Extra hair growth (Male pattern hair growth)
- Obesity
- Hair loss (Hirsutism)
- Acne breakouts
- Migraine attacks
- Skin darkening
- Psychological disorders like depression
- Sleep apnea

Each month, the two ovaries alternately release mature, ready-to-fertilize eggs in a typical menstrual cycle. However, in the case of PCOD, the ovaries frequently release immature or only partially-mature eggs, which can grow into cysts. It leads the ovaries to swell and become enlarged. Ordinary, the ovaries release a limited amount of androgens (male hormones) during the cycle; however, in this case, the ovaries start generating androgens in excess, resulting in symptoms such as male pattern hair loss, abdominal weight gain, irregular periods, and, in some extreme cases, infertility.



Fig. 5: Impact of PCOD and Pregnancy.

VII. Impact of PCOD on Pregnancy

PCOD is not a medical emergency and shouldn't lead to infertility in all women. In 75% of cases, women with PCOD can easily conceive with proper guidelines and a few lifestyle modifications. For women with PCOS, conception can be challenging due to the abundance of hormonal imbalances. PCOD has been connected to obesity and being overweight, losing weight with this condition is not an easy task.

Other Possible Complications with PCOD

- Eating disorders
- Psychological disorders
- Heart Disease
- Diabetes
- Metabolic syndrome
- Infertility
- Miscarriage or premature childbirth
- Sleep apnea
- Endometrial

VIII. Moving Cupping Therapy in PCOD

Moving Cupping therapy is an excellent way to improve the symptoms of PCOD like inflammation, obesity, menstrual irregularities, migraines, and digestive disorders. It may also alleviate mental health issues like depression and anxiety attacks. Massage-like moving cupping treatment applies steady pressure to the vein that delivers blood to the uterus and ovaries. That causes blood to rush into the pelvic organs. Women with PCOD can benefit from this by improving circulation to the reproductive system, inducing ovulation, and managing menstruation. Massage therapy may also assist in breaking the connective tissue within the reproductive organs, reducing inflammation and anxiety. Relaxing your muscles and releasing internal tension will help your body sustain a healthy reproductive system.

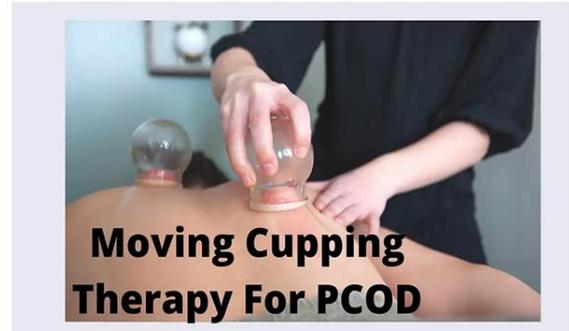


Fig. 6: Cupping therapy for PCOD.

IX. Hijama Cupping Therapy

Hijama cupping therapy has been found effective treatment for Polycystic ovarian disease (PCOD), in which female ovaries produce immature or partly mature eggs, which become cysts in the ovaries. The success rate for the treatment of PCOD through Hijama cupping therapy is very high, Shukar Alhumduallah. Hijama cupping therapy induces ovulation and has an anovulatory cycle. It also helps to remove blockages and inflammation of the fallopian tubes. Hijama cupping helps to regulate the menstrual cycle. Cupping therapy increases the body's ability to expel toxins. The lymphatic system removes toxins from the body and increases blood flow. The increased blood flow may help relieve muscular tension and promote natural healing. Cupping also energizes the body. As long as the energy inside the blood circulates, an individual remains healthy.

PCOD may not affect infertility in most women. They can ovulate and become pregnant with little help. Applying Hijama cups on the front side of the belly and at the lower back helps to target the problem area in the reproductive system that causes infertility.



Fig. 7: Cupping point to PCOD & infertility.

Hijama cupping therapy detoxifies the body and regulates the menstrual cycle and hormonal imbalances. Hijama is also beneficial for several chronic health illnesses. In a recent study, Hijama cupping therapy was assessed for the menstrual cycle, extra hair growth, and the manifestation of PCOS. The signs and symptoms of PCOS and PCOD are somewhat similar, as this study may be related to PCOD patients. According to Persian medicine recommendations, wet cupping therapy on calf muscles can induce menstrual bleeding. The study

showed significant improvement in participants' menstrual cycle, reduced extra hair growth, aid with insulin resistance, and diminished migraines. Generally, patients feel very confident about the increase in their well-being. Hijama cupping therapy helps to maintain the hormonal imbalance in the body. It helps to regulate menstrual periods and also eases menstruation and cramps. Hijama also helps with hirsutism (a condition of unwanted male-pattern hair in women). Overall muscular pains also reduce with Hijama. It also helps to target the problem area in the reproductive system that causes infertility in women. Hijama is a natural, holistic, healing therapy that connects the body, mind, and soul. Hijama cupping therapy with a well-balanced diet and lifestyle change is the best treatment for PCOD. Allah (SWT) has provided us with tools like Hijama for Shifa, of course, the ultimate Shifa comes from Allah (SWT). Maintaining a healthy weight, following a complex carbohydrate diet, regular exercise, and being active will aid PCOD and its underlying symptoms.

X. PCOD and Diet

Although no single meal can cause PCOD, good nutrition can help you avoid the symptoms.

There is no permanent cure for PCOD, but symptoms may be managed with nutritious dietary habits and tips. Let's explore nutritional do's and don'ts to manage PCOD

- It is better to avoid red meat and processed meat like hot dogs and sausages as it may increase the risk of infertility. Include lean meat like fish in your diet.
- Because PCOD is related to insulin resistance, it is better to avoid a diet high in starch and sugar and limit the intake of highly processed carbohydrates. Intake of processed flour bread, desserts, and soft drinks should be avoided too.
- Avoid saturated fats like beef, lamb, lard, cream, butter, and cheese. Saturated fats may raise cholesterol and may add extra pounds to your weight. Certain baked items are also full of such fats, so better to avoid them.
- Whole wheat products, barley, chickpeas, lentils, split peas, quinoa, popcorn, and sweet potatoes are high in fiber and can help you lose weight when dieting.
- Avoid sweets like jaggery, honey, refined cereals, and white rice.
- Choose food items with low glycerine indexes, such as whole grains, wheat pasta, and brown rice.
- Having almonds, nuts, walnuts, flax seeds, and sesame seeds can do wonders with PCOD.
- Include more fruits and vegetables in your daily routine. Dark green leafy vegetables like lettuce, spinach, and broccoli and red fruits like berries, peaches, watermelon, and apples are rich in nutrients and antioxidants.
- PCOD individuals may also have water retention, which can be avoided by drinking plenty of water and eating small, frequent meals.

XI. Home Remedies to manage PCOD

1. Early in the morning consume a warm glass of water with a pinch of lemon and honey.
2. Make your habit of taking a glass of milk with a pinch of turmeric and black pepper every day or consuming a bowl of yogurt.
3. Twice a week, try taking a smoothie of green vegetables such as spinach, kale, celery, green apples or broccollie
4. Seasonal fruits and vegetables must be a part of your daily routine.
5. Take one tbs of desi ghee on an empty stomach.
6. Detox drinks.
 - Fenugreek seed: In a glass of water, soak 2 tbs of fenugreek seeds overnight and drink that in the morning.
 - Coriander seeds: Soak 1 tbs of coriander seeds in a lukewarm glass of water and consume that water.
 - Turmeric water: Boil a glass of water, add turmeric powder and drink turmeric tea.



Fig. 8: Common fruits for PCOD.

XII. Management of PCOD

PCOD cannot be treated completely; however, its symptoms may be decreased by making healthy lifestyle changes.

PCOD impacts female hormone balance. The following actions will assist women in lowering their androgen levels

➤ Maintain a healthy weight

Body mass index varies from 18.5 to 25.0 for females, with values more than 30 considered unhealthy. Maintaining a healthy body weight can aid in reducing overall cholesterol levels, lowering the risk of high blood pressure, heart disease, and diabetes, and maintaining proper insulin and androgen levels, which can help restore ovulation in the menstrual cycle.

➤ Healthy lifestyle changes

Healthy lifestyle changes include a nutritious diet, regular exercise, yoga, hydrating your body, and regulating your sleep patterns.

- **Deep breathing exercise**
Breathing exercise releases carbon monoxide. Breathing is responsible for 70% of toxin removal in the body. If you don't breathe fully, the body has to work extra hard to clear the toxins. When blood is sufficiently oxygenated, it transports and absorbs nutrients and vitamins more effectively. The cleaner the blood, the more difficult it is for infections to remain in your system. The more oxygen in the blood, the better our bodies perform and the stronger our bodies will be in fighting against diseases like PCOD.
- **Fasting for the cleansing of internal body organs**
Fasting is an ancient tradition that has been followed for thousands of years for the treatment of various illnesses, rejuvenation, detoxifying, and healing. Fasting also encourages the body's enzyme system to focus on detoxifying and breaking down toxins in the body fast and efficiently without the burden of heavy food digestion. Different fasting routines may reduce glucose and insulin levels which can be beneficial in shortening the symptoms of PCOD.
- **Change your posture**
Sitting or standing in one position for a long time is linked with many diseases and health conditions, including obesity, back pain, depression, cardiovascular diseases, and many others. Frequent movements increase our body's sensitivity to insulin, which reduces the risk of PCOD and other health issues.
- **Sunbathing**
Exposure to sunshine increases vitamin D levels. An adequate vitamin D level is crucial for many different aspects of health. It may also be helpful for PCOD. Insulin resistance seems more severe in women with vitamin D deficiency and PCOD than in those with PCOD but no vitamin D deficiency. Insulin resistance is associated with poor blood sugar control, and this data suggests that vitamin D may play a role in insulin resistance in PCOD patients.

Discussion

This review study showed that thousands years ago physicians confirmed that phlebotomy and calves wet-cupping are therapeutic options in oligo-amenorrhea especially in PCOS. These procedures recommended for managing of PCOS related disease such as diabetes especially onset of disease. Recent studies demonstrate efficacy of wet-cupping on regulating menstruation or fertilizing, though that methods of wet-cupping in these studies have not been similar. However, we didn't find any research about effect of phlebotomy on menstruation, we found many studies about effectiveness of phlebotomy in management of metabolic disorders and diabetes that related to PCOS. Other research demonstrate long term phlebotomy can decrease the risk

of new-onset diabetes in chronic hepatitis patients. Nowadays it is known that insulin resistance interrelated with the most patients with poly cystic ovarian syndrome and insulin resistance will be broken with blood donation. Considering the explained these manipulations, it seems that amount of blood excreted must be massive that conceives decrease of serum iron. Recent studies show reducing of serum iron can lead insulin resistance to decrease, which confirm Persian physicians' viewpoints. On the other hand, a few studies show that wet-cupping apart from amount of blood excreted is effective in ovulatory cycle, decrease of blood sugar, glycosylated hemoglobin and temporary serum Iron. Thus wet-cupping and phlebotomy could be notable and more studies are needed to explain the affectiveness, mechanism and relationship of phlebotomy and wet-cupping in treatment of PCOS.

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