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THE CONCEPT AND PREVENTIVE ASPECT OF OVARIAN DISEASEES IN UNANI SYSTEM OF MEDICINE- A REVIEW

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Abstract:

Polycystic ovarian disease (PCOD) is the most common endocrine abnormality of women of reproductive age, and is the commonest cause of infertility due to anovulation. PCOD affects 5-10% of reproductive age women rising till 15% in women with infertility. This disease has been described by eminent Unani Physicians in the classical literary books under the headings of amenorrhoea, obesity, phlegmatic disease and liver disorders. Unani concept of PCOD is mainly based on the dominance of khilte balgham (phlegm). The predominant symptoms of PCOD like amenorrhoea, oligomenorrhoea and obesity have been attributed to arise of phlegm. So it is claimed that PCOD arises due to predominance of phlegm in the body which leads to cyst formation in the ovaries, obesity and amenorrhoea. This disease is complex, as it further gives rise to complications like infertility, cardiovascular ailments, type-2 diabetes mellitus, metabolic syndrome, carcinoma of breast and endometrium. Such a complicated disease has no satisfactory treatment till now and most often patient gets only symptomatic treatment with hormones and insulin sensitizer and becomes drug dependent in the long term. Unani physicians have recommended regular induction of menstruation as one of treatment modality applied for women who has developed masculine features suggestive of PCOD. They have given a line of management based on correction of

temperament, menstrual regulation by use of emmenagogue drugs and local application of herbs to reduce the severity of hair growth, acne and hyper pigmentation due to PCOD.

Keywords: PCOD, Menstrual irregularities, Unani medicine, Insulin sensitizers, herbal drugs.

1. Introduction

In classical Unani text, it is mentioned that ihtibas-i-tams (amenorrhoea) usually occurs in women with Balghami mizaj (phlegmatic temperament) and fair complexion, and is mainly caused by dominance of khilt-ibalgham (phlegm) which increases the viscosity of khun-i-hayd (menstrual blood) and form sudda (obstruction), as a result menstrual blood fails to expelled out of the uterus. Even, abnormal production of balgham causes zo'af-I jigar (liver dysfunction) which leads to ihtibas-i-tams and this abnormal balgham gets accumulated in sac to form cyst in ovaries. Any disturbance in menstrual regularity is abnormal and may lead to consequences like obesity, infertility, virilization, hysteria, leucorrhoea, ascites, uterine cancer, psychological stress etc. The treatment plan in Unani system of medicine for secondary amenorrhoea in PCOD patients is based on the concept that, treat the cause of amenorrhoea i.e. PCOD with life style modification through tadbir (regimental therapy), ghiza (diet), dawa (medicines); use of qawimudirr-i-haydadvia (strong emmenogogue drugs) to induce menstruation; use of munzij (coctive) wamushil-i-balghamadvia (purgative) drugs for tanqia-i-badan (detoxification of the body) and finally use of Unani medicine which act as insulin sensitizers. Several single drugs and compound formulations are enlisted in the management of secondary amenorrhoea in PCOD patients. Drugs such as Muqil (Commiphora mukul), Murmakki (Commiphoramyrrha,) and Abhal (Juniperuscommunis Linn.) was selected as research drugs to induce menstruation in PCOD patients, as they exhibit the properties of mudirr-i-bawl wahayd (diuretic and emmenogogue), mufattit-i-sudad (deobstruent), mulattifkhun (anti-thrombotic), muharrik (stimulant),muqawwi-i-jigar (liver tonic), mujaffif (dessicant) muhallil-i-waram (anti-inflammatory), munaffis wamukhrij-i-balgham (expectorant), mushily (purgative) etc. Moreover, pharmacological studies suggest that Muqil, Murand Abhal possess hypoglycemic, hypolipidemic, antithrombotic, antioxidant, anti-inflammatory, and stimulant activities. Further, these drugs contain steroids and flavonoids, Mur contains phytosterol, saponins, terpenoids, lignans, phenolic compounds etc, while Abhal contains glycosides and alkaloids as well, which probably may induce withdrawal bleeding and regularize the menstruation by reduction in BMI and improving insulin resistance in secondary amenorrhea associated with PCOD.

The modern civilization has given rise to various life style diseases. The sedentary life style, craving towards the junk food, emotional and behavioral disturbances (like highly competitive attitude and social insecurities); all these factors disturb the HPO Axis (hypo thalamus- pituitary-ovarian axis) and perpetuate life style diseases like PCOD. This disease is considered as the commonest endocrine abnormality in women of reproductive age affecting 5-10% of the reproductive women rising till 15% in women with infertility and it accounts for about 75% of an ovulatory infertility. It results in production of high amounts of androgen particularly testosterone and chronic anovulation. Hyperandrogenism manifest clinically as hirsuitism, acne, alopecia and virilization. PCOD accounts for most cases of oligomenorrhoea and about a third of those of

amenorrhea. History, examination, and first line investigations usually establish the diagnosis.

The hallmark clinical features of PCOD are menstrual irregularities (amenorrhea, oligomenorrhoea, or other signs of irregular uterine bleeding), signs of androgen excess, and obesity. This disease is complex and it further gives rise to serious complications like infertility, cardiovascular ailments, type-2 diabetes mellitus and carcinoma of breast and endometrium. The onset of this disease is peri–menarcheal, as during this stage major endocrinological and emotional change takes place and this probably could explain the reason behind its onset at this stage.

2. Unani concept of Medicine of PCOD.

In unani system of medicine the description of PCOD has been described vividly by various Unani physicians under the headings of ehtebase tams and uqr. It has been mentioned that sue mizaj barid (abnormal cold temperament) of the liver may lead to abnormal production of phlegm. Dominance of khilte balgham (phlegm) may lead to formation of cysts in the ovaries. The cause of infertility in females due to obesity and PCOD as described by modern medicine are very much similar to the causes and features of uqr in unani medicine. Unani physicians recorded combination of signs conjoined with menstrual irregularities i.e. amenorrhoea, oligomenorrhea , including hirsutism obesity, acne, hoarseness of voice and infertility, which are suggestive of PCOD. It is also described that women become amenorrhoeic if their mizaj is transformed towards masculinity and develops male pattern hair growth, hoarseness of voice etc .The Unani term coined for PCOD is Marz Akyas Khusytur Rehm; is in fact an Arabic translation of PCOD. This disease has been described by Unani Physicians under the headings of amenorrhoea, obesity, phlegmatic disease and liver disorders. Unani concept of PCOD is mainly based on the dominance of khilte balgham (phlegm). It has been mentioned in classical books that sue mizaj barid (abnormal cold temperament) of the liver may leads to abnormal production of phlegm, as liver is unable to convert chyme into blood; instead it converts it into phlegmatic blood or tenacious phlegm. One of the abnormal forms of phlegm is balgham mayi, which is thinner in consistency and can accumulate in sacs to form cysts. Also the other predominant symptoms of PCOD like amenorrhoea, oligomenorrhoea and obesity have been attributed to rise of phlegm hence, it is claimed that PCOD arises due to predominance of phlegm in the body which leads to cyst formation in ovaries, obesity and amenorrhoea. The Unani Physicians consider that the early twenty years of life are the period of childhood which is predominated by phlegm; hence the phlegmatic disorders are more likely to occur at this stage. This probably may explain the role of phlegm as a contributing factor for the onset of this disease during this age group. Unani physicians mentioned the description of PCOD under the headings of amenorrhoea, obesity, phlegmatic diseases and liver disorders.

3. Ihtibas-i-tams (Amenorrhea):

In classical Unani text, it is defined as cessation of menstruation, either it varies from scanty flow to complete cessation or it occurs at interval of ≥2 months. Duration of inter menstrual period ranges from 20 to 60 days and if it exceeds, above this level then, it is considered as abnormal and called as ihtibas-i-tams. It usually occurs in women having balghami mizaj and fair complexion15 and such women generally suffer from usr-i-tams, as heavy menstrual bleeding may occur after a long period of amenorrhoea.

Etiopathogenesis of PCOD

(A) Su'-i-mizaj barid causes sudda formation in uterine blood vessels due to excessive intake of fluids, which in turn leads to amenorrhoea and infertility.

(B) Akhlat-i-ghaliz mainly balgham increases the viscosity of blood due to lazujat.This ghaliz madda gets accumulates in the blood after intake of ghaliz and sakhil ghiza and forms sudda, which blocks the uterine vessels and results in amenorrhoea.

(C) Zo'af-i-jigar causes amenorrhoea via three factors:

I. Blood flow to distant organs fails as liver is unable to differentiate the blood from other body fluids.

II. Improper tawlid-i-khun (defective haemopoesis).

III. Formation of sudda within the liver causes obstruction in blood flow towards the uterus.

(d) Farbihi causes amenorrhoea in three ways:

I. Excessive fat deposition on the uterus compresses the uterine blood vessels.

II. Sudda formation due to excess accumulation of balgham in uterine vessels.

III. Alteration in the ovarian function due to dominance of rutubat and burudat in the body causes tul ihtibas-i-mani (chronic anovulation); which results in menstrual irregularities and infertility.

Diagnosis: It is based on clinical presentation of the patient.

General symptoms: Headache, dyspnea and chest pain on exertion, palpitation, fainting, indigestion, loss of appetite, nausea, excessive thirst, constipation, heaviness in the body, restlessness, dysuria, low urine output, high coloured urine, excessive sleep, salivation, tiredness, obesity etc.

4. Specific symptoms of PCOD.

Ghalba-i-balgham: Patient is obese, puffy and flabby body, cold skin, pale face, prominent vessels, nabz- bati and mutafawit, bawl- sufaid, ghaliz and kasir, baraz-balghami, menstrual blood is red in colour and thin in consistency, and scanty pubic hair

Zo'af-i-jigar: Patient present with h/o liver diseases and c/o heaviness in right hypochondium, whitish coloured urine seldom mixed with blood and change in skin color. On examination- hardness felt in right hypochondric region.

Sudda: Menses stops gradually, feeling of heaviness in the body, abdominal distension due to flatulence, and change in skin color. Sometimes amenorrhea results in marked changes in the body structure such as, appearance of excessive hair growth on the body mainly on face, hoarseness of voice, and change in temperament of the organs as well as the body. These changes mainly occur in those women who are multiparous; having musculine features, prominent vessels and such women resembles men.

5. Complications of PCOD.

Ibn Sina states that when blood goes towards the uterus (which is a natural passage for excretion of menstrual blood) and if it does not find the way to escape out from the body; it will return back to

Fig. 1 Hasan Ibn Ali bin sina 981-1037

Fig. 2 Muhammad ibn Zakariya al-Razi)

the body, and when this process is repeated several times, it results in complications such as ikhtinaq al-rahim (hysteria), sayalan al-rahim (leucorrhoea), waram al-sulb sawdawi wa saqirus of rahim (uterine tumours and malignancy), uqr (infertility), waram al-jigar (hepatitis)1 istisqa (ascitis) awram-i-ahsha (visceral inflammation) malankholia, generalised anasarca etc. Ibn Sina states that amenorrhoea is associated with tul ihtibas-i-mani, farbihi, and uqrand such type of women resembles men. Thus, a well-established association exists between anovulation, amenorrhoea, obesity, and infertility which correlate with polycystic ovarian disease.

I. **PCOD:** It is mainly based on the dominance of khilt-i-balgham. It has been mentioned in Unani encyclopaedia's that su'i mizaj barid (abnormal cold temperament) of the liver may leads to abnormal production of balgham, as liver is unable to convert chyme into blood; instead it converts it into balgham-i-lazuj. One of the abnormal forms of balgham is ma'i balgham, which is thinner in consistency and can accumulate in sacs to form cysts. Also the other predominant symptoms of PCOD like amenorrhoea, oligomenorrhoea and obesity have been attributed to rise of balgham. Hence, it is claimed that PCOD arises due to dominance of khilt-i-balgham in the body which leads to cyst formation in ovaries, amenorrhoea, obesity and infertility.

II. **Hirsutism**: It is mentioned as a complication of prolonged amenorrhoea associated with other masculine features like hoarseness of voice, male body contour, acne etc. Ibn Sina and Ismail Jurjani explained the basic pathophysiology of hirsutism as variation in normal temperament of women. If amenorrhoea persists for a long duration, it causes alterations in internal environment of the body and disturbed the equilibrium status of women, leading to growth of excessive hair over the body. The normal temperament of women gets transformed towards that of men due to prolonged amenorrhoea, which is mainly due to ihtiraq of balgham to sawda which leads to hirsutism, hyper pigmentation (acanthosis nigricans) and formation of some unwanted material which is being excreted through skin pores in the form of busur-i-labaniyya (acne). It was observed by Ibn Sina, Ismail Jurjani and Al-Razi that development of masculine features is more common in obese women with robust body and prominent blood vessels, as these women have almost similar temperament as that of men.

6. Diagnosis by clinical presentation of PCOD.

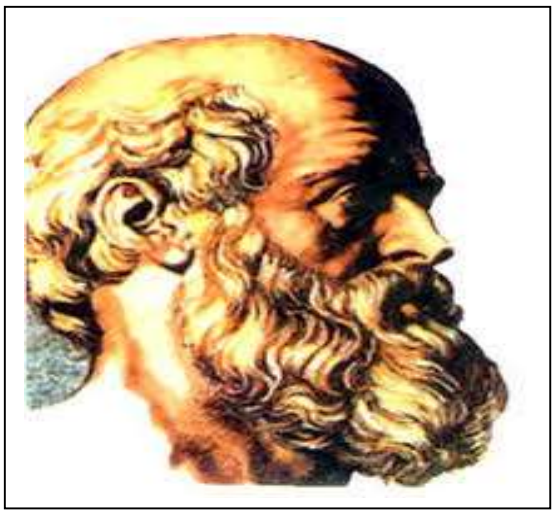

Fig. 3 Hippocrates: (460-370 BC)

Fig. 4 Claudius Galenus (129 -210 AD

Rhazes recorded combination of signs conjoined with menstrual irregularities (oligomenorrhoea, amenorrhoea) including Hirsutism, obesity, acne, hoarseness of voice and infertility, which are suggestive of polycystic ovarian disease and hyperandrogenism . Hippocrates (460-370 BC) first documented the affiliation of excess facial and body hair (Hirsutism) in females with prolonged amenorrhea, obesity and infertility; similar observations were reported by Galen (130-200 AD). Hirsutism is mentioned in classical Unani literature as a complication of prolonged amenorrhea associated with other masculine features like hoarseness of voice, male body contour, acne etc. The pathophysiology complicated disease has no satisfactory treatment till now and most often patient gets only symptomatic treatment with hormones and insulin sensitizers but becomes drug dependent in long term.

7. Management of PCOD in Unani System of Medicine.

Women with PCOD are currently treated according to their presenting features like irregular periods, infertility and Hirsutism.

- Oral contraceptives in menstrual disturbance.
- Clomiphene citrate, ovarian drilling/ laser treatment and assisted reproductive techniques in anovulatory infertility.
- Cyproterone acetate, ethinylestradiol and spironolactone in hirsutism and acne.
- Weight loss in menstrual disturbance and anovulatory infertility helps in improvement of metabolic perturbances and reduces the risk of coronary heart disease.
- Insulin sensitizing agents (such as metformin) in obesity, androgen excess, menstrual disturbance, anovulatory infertility and metabolic perturbances.

8. Treatment of PCOD in Unani system of medicine.

The main aim of Unani treatment in women with PCOD is:

I. Detoxification of body

II. Strengthening and revitalizing the female reproductive system and regularizing menstrual cycles.

III. Rectifying hormonal imbalance by using unani medicine Unani system of medicine is the oldest system that prevails till date with its effective remedies.

In Unani system of medicine, the medicinal plant preparations have found widespread use particularly in the case of disease not amenable to treatment by modem methods. The drugs which correct ehtebase tams, uqr and sue mizaj barid are generally found to be useful in PCOD, but their efficacy has not been validated scientifically. Various single and compound drugs for amenorrhea such as Abhal, Badiyan, Aspand, Hab Balsan, Hab Khurtum, Habbul Qilt, Rewand Chini, Akleelul Mulk, Tukhm Kasus, Kharkhask, Parsiya-O-Shan, Jadwar, Akarkarha etc.8, which are widely used in the management of ehtebase tams and uqr. Compound formulations such as sharbat ersa, sharbat shikanjabeen asli, etc., are also used. Moreover, Unani literature mentioned to be used for hepatoprotection, which in turn refers for the correction of hormonal imbalance due to PCOD. These drugs are also containing phyto-estrogens that mimic the estrogenic action and normalize the menstrual cycle. In PCOD these drugs having the properties of Mohallil Auram (Anti-Inflammatory) Muffateh (Vasodilators), Mudire Boul-o-Haiz (Diuretic and Emmenogague), Mulatif, Musakkin Dard (Analgesic), Muqawi Meda wa Jigar (Tonic To Stomach and Liver), Muqawi Dimagh (Tonic To Brain), Muqawi Bah(Aphrodisiac) etc . All these drugs are in the first degree of hot and dry temperament suggesting that the drugs possess moderate degree of hararat and yabusat, which suits for ehtebase tams and uqr, caused by sue mizaj barid.

A. ILaj bil Tadbeer (Regimenal therapy):

I. **Riyazat**: Riyazat-i-qawi to reduce body weight.

II. **Dalak**: Natrun or zift balut followed by hammam can reduce fat accumulation.

III. **Abzan**: Joshanda of mulattif drugs such as shibbat, marzanjosh, pudina, sudab, babuna, aqleelul malik, sa'atar, qardmana, kalonji, heeng, asaroon, tagar, doqu.

IV. **Takmid**: Takmid at lower abdomen with har advia mainly advia-i-muhammira as it stimulates blood flow towards the uterus.

V. **Zimad**: Joshanda of har and mulattif advia over lower abdomen.

VI. **Huqna**: Sheham hanzal, ro'ghan zaitoon, namak, boriq.

VII. **Humul:** Shehad, ro'ghan sosan, mur, samagh kankaz, asal musaffa, sakbeenaj, muqil, ro'ghan sosan, and mur.

VIII. **Firzaja:** Ma'al-asal, ro'ghan sosan and murmakki.

IX. **Hammam-i-yabis:** It is recommended in obese women before taking meals, and after the procedure, advise her to sleep for some time, then use small quantity of food.

X. **Fasd:** Fasd of rag-i-safin and rag-i-mabiz as it diverts the flow of blood towards the uterus to induce menstruation.

XI. **Hijama:** Application of hijama over the calf muscles is more beneficial in comparison to fasd of rag-i-safin to induce menstruation, in obese and robust women having narrow uterine vessels and whose blood is thin; as venesection fails to evacuate the sufficient amount of blood from the narrow uterine vessels but the cupping does, as it purifies the blood. Hijama at sa'aq forcefully absorb morbid matter from the upper part of the body and divert it towards the uterus. It is applied 2 or 3 days prior to the

expected menstruation, one day on one calf followed by its application on next day on second calf to induce menstruation.

Life-style modifications including regular exercise, brisk walk, diet control and adequate sleep. If the patient is obese, weight reduction is advised; this can be facilitated by hammame yabis (steam bath) and dalak (massage). To induce menstruation, Hijama (wet cupping) is applied over the calf muscles of both lower limbs to divert the flow of blood towards the uterus.

B. ILaj bil Ghiza (Dieto-therapy):

I. Diet should be light, nutritious and easily digestible.

II. Use of fibrous food including green leafy vegetables and fresh fruits.

III. Avoid cold and dry food, late digestible food, heavy and spicy food.

IV. Drink plenty of fluids.

C. ILaj bid dawa (Pharmacotherapy):

Alteration of normal temperament of women was considered as central dogma for Hirsutism. It was said that persistence of amenorrhoea for a long duration causes alterations in internal environment of women's body and status of equilibrium is disturbed, leading to formation of some unwanted material which is being excreted through skin pores in the form of busoore labnia (acne) and also participate in the growth of thick hair over the body. As the normal temperament of women are cold and moist and with prolonged amenorrhoea, it gets transformed towards that of men (hot and dry). This is mainly because of the ehteraq (detonation) of normal phlegm (cold and moist) to black bile (hot and dry). The effect of this souda (black bile) on skin leads to Hirsutism and hyper pigmentation.

It was observed by Ibn Sina, Ismail Jurjani and Al Razi that development of masculine features is more common in obese women with robust body and prominent blood vessels, as these women have almost similar temperament as that of men. PCOD may complicate further leading to infertility, insulin resistance, metabolic syndrome etc. Such a Rhazes recommended regular induction of menstruation as one of treatment modality applied for women who has developed masculine features suggestive of PCOD.

D. Ilaj bil Yad (Surgical Treatment)

Fasd (venesection) of Rage Safin (saphenous vein) to divert the flow of blood towards the uterus to induce mensturuation.

9. Usoole Ilaj

I. Life style modification: Ilaj bi'l ghiza:

Taqlil-i-ghiza1

Use mulattif aghzia likeluke warm water or sirka / kanji in empty stomach.

II. Diet allowed

Use qalil al-taghziya wa kasir al-kamiya't ghiza like vegetables & fruits etc which fills the stomach. Add spices such as filfil, raai, zeera, lehsan to the vegetables; use plain soup, vegetables with dry chapatti.

III. Diet restricted

Avoid cold water, milk, butter, mutton, fish, oily and fried food.

10.Principles of Treatment

I. Idrar haiz with use of mudire haiz drugs.

II. Tadeel mizaj with use of munzij wa mushil balgham drugs

III. Weight reduction

IV. Specific drugs

a) Mudire Haiz (Emmenogogue) Drugs:

(a)Single Drugs: Abhal, Badiyan, Post Amaltas,, Persiawa Shan, Asgand, Aspand, Habbe Balsan, Habbe Qillt, Habbe Qurtum, Rewand Chini, Tukhme Kasoos, Khashkhash, Gule Teesu, Karafs, Elwa, Heeng, Jausheeer, Asaroon, Turmus, Tukhme Gazar. Darchini, ayarij feeqra, sakbeenaj, jausheer, junbedastar, kardmana, tukhm marzanjosh, mushkatramashi, abhal, majeeth, pudina nehri, pudina kohi, afsanteen, soanf, kibr, karafs, anisoon, sudab, zarawand, irsa, bakhur maryam, ashnan, asaroon, izkhar, qust, habb-ul-ghar, javitri, o'od balsan, ushq, murmakki, indrain, farfiyoon, kalonji, turmus, lobiya etc

(b)Compound formulations: Habbe mudir, Joshanda mudir haiz, Sharbat buzoori, Murakkabate foulad etc. These emmenagogue drugs are used with uterine tonics like majoon muqawwi rehm which consists of asgand only as it contains phytohormones which induces the menstruation by maintaining hormonal balance. Qurs abhal, ma'jun abhal, sharbat buzuri, sharbat kasoos, sharbat ja'ada, sharbat biranjasif, sharbat saleekha, naqu'buzur, dhamarsa, ayarij feeqra, loghazia, aqras mur,

I. Tadeel Mizaj (Correction of temperament):

a) Munzij: Mavez Munaqqa, Badiyan, Aslusoos, Persia wa Shan, Anjeer Zard

b) Mushil: Ayarij Faiqrah, Turbud, Habun Neel with Arqe Badiyan.

c) Tabreed: Khameera Gauzaban Sada wrapped in Warqe Nuqra

II. Weight Reduction:

a) Dawae Luk Sagheer with Arqe Badiyan

b) Safoofe Muhazzil with Arqe Zeera.

c) Itrefil Sagheer at bed time.

III. Specific Drugs used in PCOD.

A. Tulsi: According to unani System of medicine, "The androgens are not utilised because the ovulation process does not take place. Also, the SHBG protein produced by liver is also pretty low. This is why women have excessive facial hair growth and acne, and trouble conceiving. Tulsi can control androgens and moderate insulin levels. It's also an excellent antioxidant. Chew at least 10 leaves early in the morning on an empty stomach. Consume boiled tulsi water on a regular basis."

Fig. 5 Tulsi Leaf for PCOD

Fig. 6 Honey for PCOD

B. Honey: Obesity and PCOS are by-products of each other. PCOS mess up hormones in the body, and this leads to obesity. If no steps are taken to reduce weight, it could lead to higher order of diseases like arthritis and heart ailments. Anusha adds, "Honey reduces hunger

Fig. 7 Tinda for PCOD

Fig. 8 Karela for PCOD

pangs and keeps you full. Mix one tbsp of honey with lemon and lukewarm water and have it only on an empty stomach early in the morning. This aids in losing weight. Do not heat the honey or have it anytime later than, say, 7.30 am, as it can lead to weight gain."

C. Bitter gourd and Ivy gourd: Bitter gourd (karela) and ivy gourd (tinda) are prescribed to diabetics to bring the insulin and glucose level under control. The leaves and the vegetables, both, can be consumed by women with PCOS. They can be cooked normally and had at least five times a week. Alternatively, you can also beat karela and consume it in the form of juice.

D. Amla: The Indian gooseberry is a fruit that is adept at controlling blood sugar levels and improving fertility in women. Amla is also rich in antioxidants and vitamin C. It's also a very good cleanser; it flushes out the toxins in the body and thus, aids in weight reduction. Take an amla and squeeze out its juice in a glass. Add lukewarm water and consume it. You can also add amla in a cup of yogurt to

make raita or eat it raw, minus its seeds."

E. Abhal/Juniper (Juniperus communis)- and **Mushktramashi/ Pennyroyal (Mentha pulegium) -**:

Fig. 9 Amla for PCOD

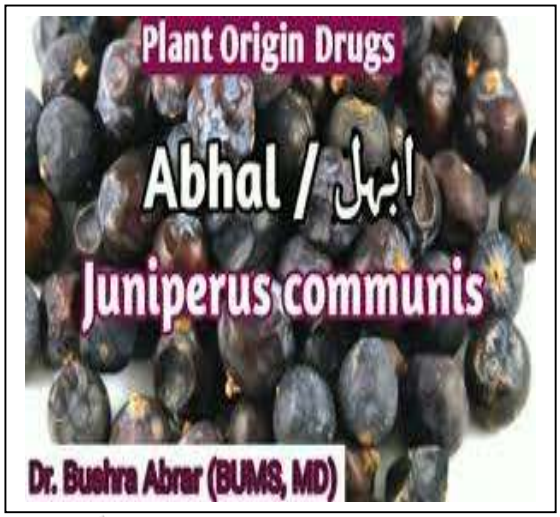

Fig. 10 Abhal for PCOD

They can be used in cases of PCOD, as clinical study on oligomenorrhoea, the retrospective finding was that 12 out of 19 cases of PCOD in the pretrial scan were reported to be normal in the post-trial USG of pelvis, along with restoration of menstruation. Hence, this formulation regulates menstruation through its effect on the ovaries.

Neem. They can be used in PCOD, as clinical study conducted on PCOD showed that 20 patients had PCOD at base line and after treatment, it persist in 6 patients only. This effect is attributed to anti-androgenic, hypoglycemic and insulin sensitizing activities of these drugs which serves as an alternate option in PCOD.

Fig. 11 Neem for PCOD

Fig. 12 Sataver for PCOD

F. Satavar: It can be used in PCOD, as clinical study conducted on infertility showed that patients had PCOD before treatment, while on post treatment scan; only 1patient had same findings. This effect is attributed to the presence of phytoestrogens- steroidal saponins in this drug which exert hormone like action in the body.

G. Aslussus/Liquorice -: In women diagnosed with PCOS, insulin secreted by pancreas is not efficiently utilized by the tissues and this leads to obesity and production of excess testosterone. Consuming fenugreek leaves or seeds will help in maintaining normal insulin levels. Methi improves glucose

tolerance in the body, which helps in weight loss. Soak methi seeds overnight and have it thrice a day on an empty stomach in the morning, and five

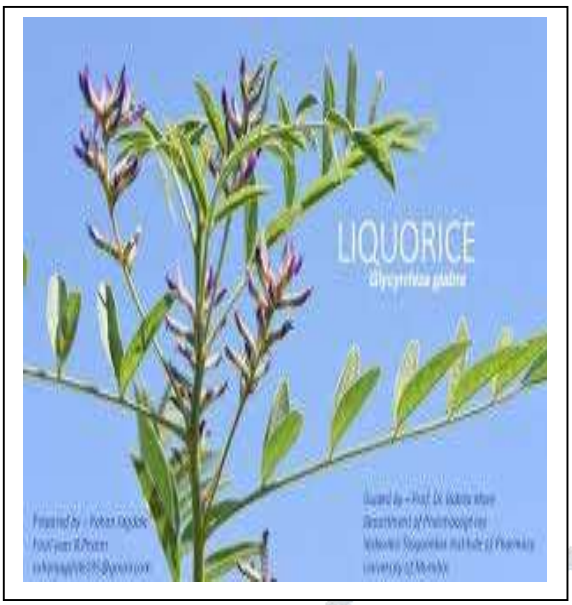

Fig. 13 Aslussus for PCOD

Fig. 14 Pudina for PCOD

minutes before lunch and dinner. You can also consume cooked methi leaves. ”Clinical studies conducted on liquorice confirmed that it reduces serum testosterone probably due to the block of hydroxysteroid dehydrogenase and lyase in PCOD.

H. Pudina / Spearmint. RCTs carried out on patients of hirsutism with spearmint tea, confirmed that it has anti-androgenic properties as free and total testosterone levels and degree of hirsutism were reduced. Hence, it could be a natural alternative for women having mild hirsuitism.

I. Darchini: According to Unani, “This condiment is a proven cure for type 2 diabetes. It also has the ability to stabilize blood sugar level and reduce the insulin resistance. Studies also state that this spice increases the odds of conceiving.” Mix cinnamon with milkshakes or yogurt, bake them into cakes and muffins or just sprinkle them over your cup of chai. Since it pretty much has no calories, you don’t have to worry about piling on kilos Clinical trial on PCOD women showed significant reduction in insulin resistance by increasing phosphatidylinositol 3-kinase activity in the insulin signaling pathway due to the presence of insulin potentiating factor which enhances the insulin activity in carbohydrate metabolism.

Fig. 15 Dalchini for PCOD

Fig. 16 Alove for PCOD

J. Alsi /Flaxseed:

These seeds are very good source of fibre, omega-3 and omega-6 fatty acids and lignans, a protein that reduces the quantity of available testosterones in our body. Flax seeds help in utilising the glucose and insulin in the body, cancelling out most of the side effects of PCOS," says nutritionist and dietician Anusha M. The seeds can either be powdered and added to your breakfast or mixed with juices. You can also add them to your drinking water every day. Clinical trial conducted on PCOD patients using flaxseed (30 gm/day) showed significant decrease in serum insulin, serum total and free testosterone levels.

K. Elwa /Aloe:

Animal trial on female rats using aloe vera gel confirmed that it exerts a protective effect against PCOD by restoring the ovarian steroid status and altering steroidogenic activity due to the presence of phyto-components. It is an effective female fertility tonic, ovarian stimulant & act as an excellent choice for women with PCOD.

L. Kalonji:

Kalonji oil was proved to be effective in patients of insulin resistance syndrome and in alleviating the obesity mainly due to its insulin sensitizing action. Various components of kalonji like thymoquinone, thymol, unsaturated fatty acids, lipase and tannins are responsible for its beneficial effects in insulin resistance syndrome.

Conclusion

PCOD is a common disease that has received intensive study over the last 50 years; we still know remarkably little about its complex etiology. We have, however, learned much about the consequences and diagnosis of this disease. Positive women's reproductive health care is the ultimate goal of all gynecologists. In this regard, alternate therapeutic protocols have been followed to improve the quality of life. Potential treatment options in Unani medicines includes Idrar haiz, Tadeel mizaj, Weight reduction, Specific drugs like insulin sensitizers can be used to alleviate the ailing eves from this complicating disease. Polycystic ovary syndrome (PCOS) is a complex, reproductive and endocrine disorder affecting up to 17.8% of reproductive

aged women characterized by polycystic ovaries, chronic anovulation and hyperandrogenism leading to symptoms of oligo/amenorrhoea, hirsutism, acne, and infertility. Conventional pharmaceutical management is limited due to contraindications in women with PCOS, non-effectiveness in some circumstances, side effects and by preferences of women for alternative management. In Unani System of Medcine effective treatment is available with fewer side effects and recurrence rate; but experimental studies were conducted on few Unani medicines, that too on small number of patients with variations in dosage & duration of treatment. Hence, future trials are recommended on large sample size for longer duration to prove the efficacy and safety of Unani drugs in the management of secondary amenorrhoea in PCOD patients.

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