



## UNANI PERSPECTIVE OF POLYCYSTIC OVARIAN SYNDROME (*MARZ-E-AKYAS-E-KHUSYATUR-REHM*): A LITERATURE REVIEW

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### INTRODUCTION

Polycystic ovarian syndrome (*Marz Akyas Khusyatur Rehm*), is a prevalent, complex endocrinopathy affecting 5% - 10% of women in reproductive age; one of the leading causes of female subfertility (Azziz R, 2004). It is characterized by polycystic ovaries, hyperinsulinemia and hyperandrogenism which is implicated in the dysfunction of the hypothalamic pituitary-ovary axis, leading to anovulation and menstrual irregularity, obesity hirsutism, acne and infertility. The condition was first described in 1935 by American gynecologists (Marrinan, 2011). Cyst-related changes to the ovaries were described in 1844 (Kovacs, 2007). The syndrome acquired its most widely used name due to the common sign on ultrasound examination of multiple (poly) ovarian cysts. These "cysts" are actually immature follicles, not cysts. The follicles have developed from primordial follicles, but the development is arrested at an early stage due to the disturbed ovarian function. The follicles may be oriented along the ovarian periphery, appearing as a 'string of pearls' on ultrasound examination.

Two definitions of PCOS are commonly used:

According to NIH/NICHD (1990) - a person has PCOS if she has all of the following: (Lucidi, 2011)

1. Oligoovulation
2. Signs of androgen excess (clinical or biochemical)
3. Exclusion of other disorders that can result in menstrual irregularity and hyperandrogenism

According to ESHRE/ASRM (2003- Rotterdam Criteria) – a person has PCOS if any 2 out of 3 criteria are met (R, 2006)

1. Oligoovulation and/or anovulation
2. Excess androgen activity
3. Polycystic ovaries (by ultrasound)

### Epidemiology

The World Health Organization estimates that it affects 116 million women worldwide as of 2010 (3.4% of women). Using the Rotterdam criteria, a study revealed that about 18% of women had PCOS, and that 70% of them were previously undiagnosed (Teede H, 2010).

### Unani Aspect

The Unani system of medicine is based on the concept of equilibrium and balance of natural body humours (blood, bile, black bile and phlegm). When these humours are normal in quantity and quality and well-mixed together, they preserve the health of the body. Any imbalance or disproportionation of humours leads to diseases. *Marz-e-Akyas-e-Khusyatur-Rehm* (PCOS) is a disease of cold and moist nature and arises due to change in quantity and quality of *Balgham* (phlegm). Unani scholars attribute PCOS to the impaired temperament in liver (*Sue Mizaj Kabid*) and liver dysfunction, which may lead to abnormal production of *Balgham* (phlegm). Therefore, it can be concluded that PCOS arises due to predominance of *Balgham* in the body which leads to cyst formation in the ovaries, amenorrhea and obesity (Ibn Sina, 2010). 75% of females with anovulatory cycles are associated with Polycystic Ovarian Syndrome (PCOS) (WHO, 1992). Women with PCOS often have elevated LH levels and are at a higher risk of developing infertility, endometrial carcinoma and a number of

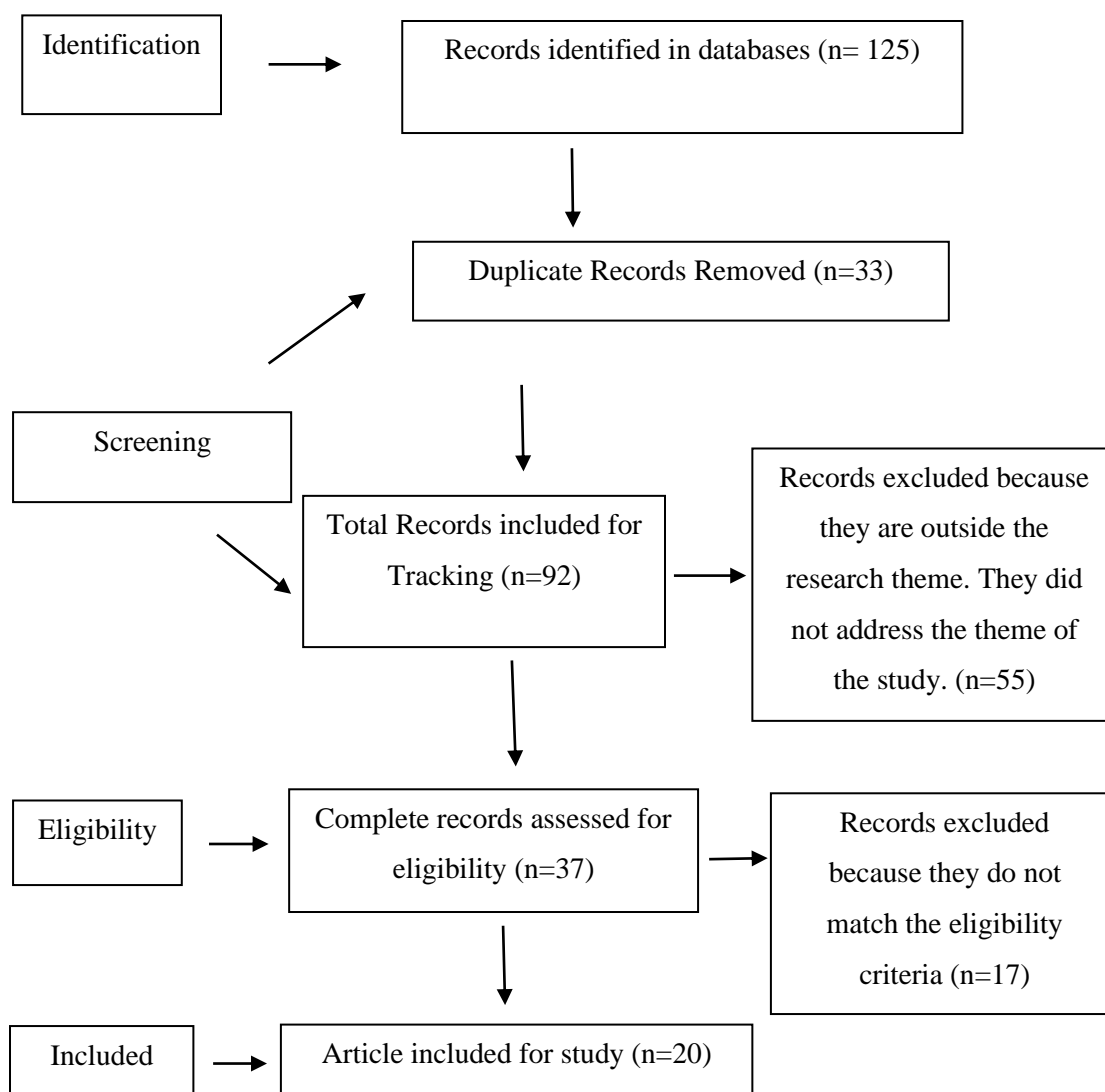


metabolic disorders, including insulin resistance, diabetes, hypertension and cardiovascular diseases (Dahlgren, E, 1991). Insulin resistance is a common finding among PCOS women with normal weight as well as overweight women (Teede H, 2010). Observing current trends, PCOS will become a major cause of infertility, therefore the need for an effective treatment protocol is becoming increasingly urgent. The basic principle of treatment is *Ilaj bil zid*, i.e. treatment is in contrast to nature and *Mizaj* (temperament) of the disease. The holistic approach of Unani treatment will have a thriving management of diseases with temperamental affiliation and its evidences were found throughout the history that Unani medicine has proven efficacy in *Marz Akyas Khusyatur Rehm*, but is lacking in scientific data for validation.

## METHODOLOGY

Information was gathered by searching many review articles, published up to now, through electronic databases such as Google Scholar, PubMed, Research Gate, etc and other authentic Unani classical texts, using the following key words: PCOS, *Marz Akyas Khusyatur Rehm*, Insulin resistance and obesity

This is designed as a narrative literature review with exploratory research design





## RESULTS AND DISCUSSION

In PCOS, the clinical features are almost similar in Modern medicine and Unani system. But the treatment methodology of the Unani system of medicine is called *ilaj bil zid*, i.e., treatment is in contrast to nature and *mizaj* (temperament) of the disease chosen and the patient treated with it. Also, treatment should include the drugs which possess *mudir e haiz*, (emmenagogue) to regulate the menstrual cycle and general tonic to strengthen the uterus (Zakariya R, 1961). In addition, diet and *riyasat* (exercise) under the *ilaj bil tadabeer* (regimental therapy) should be included as a life style modification.

Bearing the Unani concept of PCOS in mind, a number of single drugs like *zafran* (crocus sativus), *zanjbeel* (zingiber officinalis), *ood saleb* (paeonia officinalis), *musali siyah* (curculigo orchoides), *aslusoos*, (glyceyrrhiza glabra) *elwa* (aloe barbadensis) (Maharjan R, 2010) *sarphunka* (tephrosia purpurea) (Jitendra PA & Pravin TA, 2012), *lajvanti* (mimosa pudica) (Jadhav M, 2013) *Asgand* (*withania somnifera dunal* and compound formulations like *majoon e falasifa*, *majoon e supari pak*, (Dahlgren. E, 1991) *majoon e muqawwe reham*, *habb e hamal*, *dawa ul kurkum*, *dawa ul misk* and *safoof e thabashir*, (Dahlgren. E, 1991) can be used in the management of PCOS.

Also, these drugs are considered to possess anti-stress, antioxidant, anti-carcinogenic, anti-aging, cardio protective, hypothyroid, immunomodulatory, hypocholesterolemic and hypolipidemic activities.

PCOS can be analyzed using the following quantitative data

Quantitative data	Normal Range
BMI (kg/m <sup>2</sup> )	20 - 25
Waist circumference (cm)	< 88
Menstrual cycle length (d)	21 - 35
LH:FSH	< 2
Testosterone (nmol/L)	< 2.5
Fasting Glucose(mmol/L)	<6.1
Fasting Insulin (pmol/L)	14.0 – 100.0
SHBG (nmol/L)	18 – 114
Free androgen index	< 5
HOMA-IR	3

## CONCLUSION

Many women in the modern era are susceptible to PCOS, especially due to lifestyle modifications such as sedentary lifestyle, lack of exercise, craving towards junk food, etc., due to which there is a significant rise in the number of patients with subfertility, presenting with chronic anovulation, obesity, irregular menstrual cycles and insulin resistance.

By understanding the Unani concept of PCOS, treatment can be done with the help of single and compound drugs, which are cost-effective and have minimum side effects, compared to modern therapy.



So far, limited research has been done to prove the efficacy of the Unani management of PCOS. Therefore, there is a necessity of conducting large-scale clinical trials in future to prove the efficacy of Unani treatment modalities.

## ACKNOWLEDGMENTS

We extend our heartfelt gratitude to all those who guided and supported us in conducting this review study.

## REFERENCES

- Razi ABZ, (1961). Kitabul Hawi Fil Tib, (Arabic), *Osmaniya oriental Publication Bureau*, 10(1), 303
- Azziz R, Woods KS, Reyna R, Key TJ, Knochenhauer ES, Yildiz Bo. (2004). The prevalence and features of the polycystic ovary syndrome in an unselected population. *Journal of clinical endocrinology & metabolism*, 89(6), 2745–9. doi:10.1210/jc.2003- 032046.
- Azziz R. (March 2006). Diagnosis of Polycystic Ovarian Syndrome: the Rotterdam criteria are premature. *Journal Of Clinical Endocrinology & Metabolism*, 91(3), 781– 785. doi:10.1210/Jc.2005-2153.
- Dahlgren E, Friberg G, Johansson S, Lindstrom B, Oden A, Samsioe G (1991). Endometrial carcinoma; ovarian dysfunction – a risk factor in young women. *Eur J.Obstet Gynecol Reprod Biol.* 41, 143-50.
- Ibn Sina. Al-Qanoon. (Urdu Translation by Kantori G.H) (2010). *Idara Kitabus Shifa* (Vol.3 And 4), 1065-1066,1445
- Jadhav M, Menon S and Shailajan S. (2013). In vivo evaluation of *Mimosa pudica linn.* in the management of polycystic ovary using rat model. *International Journal of Applied Biology and Pharmaceutical Technology*, 4(1), 285-292.
- Jitendra PA and Pravin TA. (2012). Prospective use of *Tephrosia purpurea* in remedial treatment of PCOS: Study in Wistar rat. *ISCA Journal of Biological Sciences*, 1(3), 1-6.
- Kovacs, Gabor T, Norman, Robert (2007). Polycystic Ovary Syndrome. *Cambridge University Press*. isbn 9781139462037.
- Maharjan R, Nagar PS, Nampoothiri L. (2010). Effect of *Aloe barbadensis Mill.* formulation on letrozole induced polycystic ovarian syndrome rat model. *J ayurveda Integr Med Oct*, 1(4), 273
- Marrinan, Greg, Lin, Eugene C, Ed. (2011). Imaging in Polycystic Ovary Disease. Emedicine.
- Lucidi RS. (2011). Polycystic Ovarian Syndrome. Emedicine.
- Teede H, Deeks A, Moran L. (2010). Polycystic Ovary Syndrome: a complex condition with psychological, reproductive and metabolic manifestations that impacts on health across the lifespan. *BMC Med* 8, 41. doi:10.1186/1741-7015-8-41.
- Ferriman D, Gallwey JD (1961). Clinical Assessment of body hair growth in Women. *J Clin Endocrinol Metab*, 21:1440-1447.
- Azziz R, Woods Ks, Reyna R, Key Tj, Knochenhauer Es, Yildiz Bo (2004). The Prevalence and features of the Polycystic Ovary Syndrome in an unselected population. *J Clin Endocrinol Metab*, 89(6):2745-2749
- Hollinrake E, Abreu A, Maifeld M, Van Voorhis BJ, Dokras A (2007). Increased risk of depressive disorders in women with PolyCystic Ovary Syndrome. *Fertil Steril*, 87(6):1369-1376.
- Cela E, Robertson C, Rush K, Kousta E, White DM, Wilson H, Lyons G, Kingsley P, McCarthy MI, Franks S (2003). Prevalence of polycystic ovaries in women with androgenic alopecia. *Eur J Endocrinol* 149(5):439-442.
- Cresswell J, Fraser R, Bruce C, Egger P, Phillips D, Barker DJ (2003). Relationship between polycystic ovaries, body mass index and insulin resistance. *Acta Obstet Gynecol Scand* 82(1):61-64