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AN OVERVIEW OF POLYCYSTIC OVARIAN DISEASE FROM AN AYURVEDIC PERSPECTIVE

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ABSTRACT

PCOD is the most common endocrine disorder in women of reproductive age group, affecting 5% to 10% of women exhibiting, the full blown syndrome of hyperandrogenism, chronic anovulation and polycystic ovaries. PCOD is a disease which is related to the cystic changes in the ovary. It is the most common cause of Menstrual Irregularities, Obesity, anovulatory infertility and hyperandrogenism, etc. PCOD are not compiled as a disease or syndrome in Ayurveda, most of them have been described as symptoms of separate diseases or conditions. Ayurvedic management principles Samshodhana, Agneya dravya, Nidan parivarjana as well as modern treatment describe here. The present article is an attempt to highlighting on details of Ayurvedic review on poly cystic ovarian diseases.

KEYWORDS: Menstrual Irregularities, Obesity, anovulatory infertility and hyperandrogenism, etc.

INTRODUCTION

PCOD is most common disease found in women of reproductive age. According to a study conducted in Southern India and Maharashtra, about 9.13% of menstruating women in those regions suffer from PCOS, while 22.5% have PCOD.[1] In 1935, Irving F. Stein and Michael L. Leventhal first described a symptom complex associated with Anovulation. The Iogic behind that is the thickened tunic was preventing follicles from reaching the surface of the ovary. This disease was known for decades as Stein- Leventhal syndrome.[2] It is the most common cause of Menstrual Irregularities, obesity, anovulatory infertility and hyperandrogenism, etc.

Polycystic Ovarian Disease, the term itself indicates more than one symptoms and hence possibility for multisystem involvement with ovarian dysfunction. Just having an outlook on the symptoms of PCOD as per modern description, it becomes clear that even though they are not compiled as a disease or syndrome in Ayurveda, most of them have been described as symptoms of separate diseases or conditions.

AIMS AND OBJECTIVES

- To understand the *Lakshanas* seen in PCOD in Ayurvedic and modern science.
- To estimate the aetiopathogenesis of polycystic ovarian syndrome in Ayurveda.
- To study symptomatology of PCOD w.s.r.to Ayurveda symptoms.
- To understand line of treatment of PCOD in Ayurvedic and modern texts.

MATERIALS AND METHODS

Ayurvedic literature, *Samhitas,* internet modern gynecology books, website, journals etc.

Lakshnas Commonly Seen in PCOD

Menstrual Irregularities

Menstruation is intimately correlated with the normal functional state of the female and it is an index of her well being but, when it becomes irregular or absent it becomes a curse. Menstrual irregularities are found as amenorrhoea or oligomenorrhoea in PCOD. Ayurvedic texts have mentioned this condition under various headings i.e., *Anartava, Artavakshaya, Rajakshya,* and *Rajaksheenata.*

Dosha lakshana: *Ati samshamana janya, Vegadharanajanya, Manastapa janya*[3]

As ***Vyadhi lakshana***: *Nashtartava, Arajaska yoni*[4]*, Vandhya yoni*[5]*, Yoni arsha*[6]

As ***Upadrava***: *Pandu, Rajayakshma, Shosha, Grahani, Anashana janya, Ati samshodhana janya*[3]

Other: one of the symptoms of *Artavavaha sroto Viddha lakshana*, *Nanatmaja vyadhi* of *Vata*[7]

The symptom is same but, the *Samprapti* of all above conditions are different which is also described by *Acharya*s.

Artvavanasha is one of the *Lakshan as* of *Vedha* of *Artavavaha srotas.*[8] Where Sushruta has given *Srotoviddha lakshanas*, he referred to traumatic injury for the meaning of *Vedha* which means any trauma to *Artavavaha srotas* that is female genital tract or HPO axis leads to above said symptoms.

According to *Acharya* Bhela, women secure up all movements of the beginning from the 7th night onwards because of securement of the greatest movement from the young age onwards. The blood of the women indeed dries up the body; therefore she does not see the menstrual pigmentation herself.[9] *Acharya* Sushruta also cited *Artavakshya* while describing *Dosha dhatu mala kshaya vriddhi lakshanas.*

Acharya Shushruta given in Sutrastan the meaning of *Yathochitakale adarshanam,* as delayed menstruation could be taken; the quantity of menses is decreased and it is with pain in *Yoni* or pelvic region.[10] In PCOD, there is delayed menses sometimes with decreased quantity of menses but, the pathogenesis does not lead to dysmenorrhoea. Looking to the pathology of PCOD, there is increased of free oestrogen, which due to increased androgens cannot work on endometrium;[11] and due to anovulation there is no production of progesterone. So, when oestrogen level falls, menses occurs in excess quantity.

Bhela describes that even though the blood circulates throughout the body, because of *Alpata* and *Vikritatva*,[12] it cannot nourish *Artava*, thus depletion of *Artava* and body tissues leads to *Rajo nasha*. Description given by *Acharya* Sushruta suits the menstrual irregularities seen in PCOD regarding the status of *Dosha*s, *Dhatus, Srotas* and *Lakshanas*. The *Dosha*s, here aggravated *Vata* and *Kapha*, obstructs the passage or orifices of channels carrying *Artava*, thus *Artava* is destroyed. Though *Artava* is not finished completely, but it is not discharged monthly. There is no any role of *Pitta* here, as *Pitta vriddhi* leads to increase in excessive menses.[13] Here, the '*Marga*' can be taken as *Artavavaha srotas* which is *Avrita* by vitiated *Dosha*s. *Artavavaha srotas* does not consist of only the genital tract of women but also includes Hypothalamo-Pituitary-Ovarian axis, too. As menstruation occurs as a result of coordinated function of HPO axis, any obstruction at any level leads to menstrual irregularities and amenorrrhoea.

Anovulation

Failure to ovulate or to generate an ovum (female egg) is called 'Anovulation'. It is not mentioned as such in our classics. But the condition called '*Vandhya*' which is characterized by inability to conceive due to either anovulation or some other causes provides an unwritten sense of anovulation. There are various scattered references available of anovulation as *Beejopaghata, Pushpopaghata*[14] and *Abeejatva*[15]*,* etc. There are many conditions described for *vandhya* but infertility associated with amenorrhoea is few. According to *Sushruta Samhita*[16]*, Madhava nidana*[17] and *Yogaratnakara.*[18]

Sushruta states that in *Vandhyayoni*, the *Artava* is destroyed. Here, we can interpret *Artava* as ovum and consider *Vandhya* as anovulatory menstrual cycle. Ovum is a microscopic structure; its presence during those days was imagined due to its role in conception.[19] Vitiated *Vata dosha* is the main cause of *Vandhya yoni vyapada.*[20] Here, *Nashtartava* or anovulation is one symptom of the *Vandhya*. The woman suffering from these eight menstrual disorders becomes infertile due to *Abeejatvam* as the ultimate effect of *Artava vyapada* is '*Abeejatva'.*[21]

In PCOD, patients are suffering from menstrual disorders like oligomenorrhoea or amenorrhea with anovulation. Thus, PCOD can be included under the broad heading of *Artava vyapada.* Under the description of *Jataharinies,* Kashyapa has mentioned *Pushpaghni* where the woman menstruates in regular interval but is unable to conceive. The other symptom is corpulent and hairy cheeks. It is incurable *Jataharini.* Here, the word *'Pushpa'* is used for menstruation which comes at regular interval but it is useless means without ovum causing failure to conceive.

Obesity

It is also given under the heading of *Samtarpana janya vyadhi* where *Vandhyatva* has also been given.[22] *Sthaulya* is a *Dushya* dominant *Vyadhi* where *Meda* plays a major role in pathogenesis. *Acharya* Charaka had given detail etiopathogenesis of *Sthoulya* where he started in obese person all *Dhatus*, except *Meda*, are not being formed. *Acharya* Madhava also agreed with him.[23] So we can say that formation of *Rasa dhatu* and its *Upadhatu artava* is not being formed in women with obesity causing menstrual irregularities and infertility due to anovulation. Other symptoms include *Javoparodha* (tiredness), *Krichhra vyavayta* (dyspareunia)*, Daurgandhya* (bad body odor)*,* etc.[24]

Hyperandrogenism

It is given as symptoms of other diseases. *Atilomata* is said to be one of the *Nindita purusha*[25] which can be compared with hirsutism but it is not the place of describing it in context of PCOD. Hirsutism or excessive body hair especially in female is given as a symptom of one of the *Rewati* described by *Kashyapa*. Descriptions of some of the *Rewaties* are related with amenorrhea or menstrual irregularities. Out of these the lady with '*Pushpaghni' rewati* is having regular cycles but it is fruitless. She has corpulent and hairy cheeks. According to Kashyapa, it is *Sadhya rewati*.[26] Picture of

Pushpaghni bears resemblance with hyperandrogenism condition in which anovulation and hirsutism are prominent features.

Chikitsa Siddhanta

The clinical management of patients with PCOD should primarily symptomatic. This involved cycle regulation for menstrual dysfunction, ovulation induction for infertility, weight reduction in obesity etc.

Ayurvedic Approach of Treatment

In PCOD considering the *Doshic* involvement, the treatment should be aimed at pacifying the vitiated *Kapha*, making the *Vata anuloma* and increasing the *Agneya guna* of *Pitta*. Since etiology, symptoms are multiple; treatment may include more than one entity as.

Samshodhana

The process through which the waste products are thrown out is known as *Samshodhana*. The main *Shodhana* protocol indicated in this condition is '*Vamana*' as *Kapha* is the main dominating *Dosha*. '*Basti*' is also applied for the *Anulomana* of associated *vata*.[27] Even though '*Virechana*' will also cure *Kapha* to a certain extent, it is contraindicated here in this condition as it is *Pittashamaka* too, which is undesirable.[28]

Use of Agneya dravyas

Agneya dravyas are said to be the anti dote for *Vata* and *Kapha*. They are said to be *Pittakara*, too. Administration of such *Dravyas* in cases of amenorrhea is advised with caution as these drugs are *Vatakapha*ghna and due to *Ushna, Tikshna guna*, removes *Srotorodha,* decreases *Medodhatu* and improves *Dhatu* metabolism by removing *Ama.*[29]

Same *Swayoni-vardhana dravya* also helps in regulate menstrual cycle. *Swayoni-vardhana dravya* means those measures which are help for *AartavaVridhi.* Administration of *Dravyas* like *Tila, Kulatha* is advisable as same *Guna Dravaya* increases *Pramana* of *Aartava*.[30] Same Ayurvedic drugs like *Rajah Pravartani Vati, Kanchnar Guggulu, Ashoka arishta, Arogyavardhini vati* are used to treat symptomps of poly cystic ovarian diseases.

Eradication of the Causative Factors

Avoidance of *Nidanas* helps in preventing complications of any disease. Here, they can be taken as *Kaphakara* and *Vatadushtikara aharas- Viharas, Medovriddhikara ahara* i.e., *Vishamasana,* etc. Here it can be taken as avoidance of junk food, bakery items, cold drinks, etc.

Management of PCOD: Treating Menstrual Irregularities

Cycle disturbance in women when fertility is not an issue can be treated with progesterone only or with oral contraceptives. Oral pills which contain 35 microgram of ethinyl oestradiol and 2mg of cyproterone acetate may be good option in patients who also have hyperandrogenism (hirsutism & acne).[31] This will induce menstrual cycle and minimize the adverse effects oestrogens.

Treating Infertility/Ovulation Induction

There are several methods in inducing ovulation as.

Clomiphene Citrate (CC)

It is the simplest mode of ovulation induction. After spontaneous or progesterone induced withdrawal bleeding, the starting dose of 50mg is given for 5 days starting on the day 2, 3, 4, or 5. The patient's ovulation is monitored by TVS from 11th day. If there is a mature follicle (>18mm) as seen by ultrasound, the patient can either ovulate spontaneously or it can be triggered by 5000/10,000 I.U. of hCG.

GnRH Therapy

It has been hypothesized that by suppressing the pituitary with a GnRH analogue before ovulation induction it will reduce the LH. But both LH and FSH will get reduced, hence more of gonadotropins have to be given for ovulation induction later. Human Menopausal Gonadotrophin (HMG), obtained from the urine of postmenopausal women, contains 75 IU of FSH and 75 IU of LH. The standard protocol consists of the administration of 150 mg of HMG for 14 days, starting from day 3-5 of the cycle. Daily dose should not exceed 225IU. It also requires monitoring by TVS.

Anti-androgenic Treatment

Hirsutism can be treated with physical therapy such as bleaching, shaving, plucking, depilatory creams, electrolysis and laser; acne can be treated with oral contraceptive pills. This usually necessitates the addition of an antiandrogen therapy such as cyproterone acetate. Most women notice a regression of excess hair within 4 to 6 months but typically treatment need to be continued for at least 1-2 years to substantially reduce hair growth. Another useful anti-androgenic treatment is Spironolactone. This may be used alone or in combination with an OCP. Flutamide and Finasteride are also drugs that help reduce hirsutism and acne.[32]

Role of Insulin Sensitizers

It is demonstrated that the reduction of hyperandrogenism in women with PCOD may be achieved by interventions that improve insulin sensitivity and reduce circulating insulin. Such measure might include insulin-sensitizing agents like Metformin (500mg 8 hourly). It improves insulin sensitivity shown by a reduction in fasting plasma glucose and insulin concentrations and stimulates LH levels and free testosterone concentration in overweight women with PCOD.

Surgical Induction of Ovulation

In 1939 after removing wedges of ovarian tissue for pathologic analysis, Stein and Cohen observed that ovulatory function and regular menses were restored. It

was observed that, although ovulation was restored, postoperative adhesions were high and this caused mechanical infertility. Techniques such as 'Ovarian Drilling' by laparoscopic cautery on one or both ovaries have been used to restore ovulation and a more normal hormonal environment. Laparoscopic ovarian drilling is a simple procedure whereby several punctures are made in one or both the polycystic ovaries.

CONCLUSION

According to Ayurveda, PCOD is not a disease; it is group of various symptoms. Ancient knowledge of Ayurveda will helps in diagnosis and management poly cystic ovarian diseases in present era very well. So its review article is an attempt to highlighting on details of PCOD *Samshodhana*, *Agneya dravya*, *Nidan parivarjana*, same Ayurvedic combination like *Kanchnar gugulu, Rajapravartani vati*, *Arogyavardhini vati* are helpful for the treatment of PCOD.

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