

Review



Polycystic Ovary Syndrome in *Ayurvedic* Perspective: Interpreting an *Anukta Vyadhi* through *Trividha Bodhya Sangraha*

¹Rose Varghese, ²Nagaraj S

ABSTRACT:

Background: Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age. Since its first description in 1935, the understanding about this condition has evolved far- from being just a localized gynecological concern to a widespread, multisystem endocrinopathy. The multisystem presentation and elusive pathophysiology of PCOS make it a compelling topic for exploration through holistic frameworks like Ayurveda. However, the search for an Ayurvedic equivalent of PCOS in Ayurvedic classics doesn't yield any disorder that entirely matches the clinical picture of this condition. **Objectives:** This review considers PCOS as an *anukta vyadhi* (a condition not explicitly mentioned in the Ayurvedic texts) and aims to explore it using the framework of *Trividha Bodhya Sangraha*- (the three essential elements for understanding a disease) as outlined in Charaka samhita. This approach also aims to offer a model for evaluating other emerging or unnamed disorders in contemporary practice. **Methods:** Data regarding the clinical presentation and pathophysiological aspects of PCOS were compiled from standard endocrinology texts, clinical guidelines, and peer-reviewed literature. These features were then analysed in the light of principles and references in Ayurvedic classics in order to derive the *Trividha bodhya sangraha* for the condition. **Results and Conclusion:** PCOS is interpreted as primarily a *kapha*-predominant disorder, characterized by *medodushti* (vitiation of fat tissue), feeble state of *rasa dhatvagni* (metabolic transformation at the level of *rasa*) ((SAT-B.491), and *margavaraṇa* (channel obstruction).

KEYWORDS: Polycystic Ovary Syndrome, PCOS, *Anukta Vyadhi*, *Ayurveda*, *Trividha Bodhya Sangraha*.

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Corresponding Author Email:

rosevarghese8@gmail.com

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1. INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is a complex heterogenous endocrine disorder affecting women in reproductive age. It is probably the most common endocrine disorder in women, with a highly variable global prevalence estimate ranging from 2.2% to as high as 26%. [1-2.] Since its first description in 1935, understanding of the condition has evolved significantly— from being mostly a reproductive disorder to a metabolic disorder with multisystem sequelae. Its pathophysiology remains incompletely understood even today, though insulin resistance and hyperinsulinemia are considered pivotal mechanisms. The multisystem presentation and elusive pathophysiology of PCOS make it a compelling topic for exploration through holistic frameworks like Ayurveda, which interprets diseases through fundamental imbalances rather than isolated mechanisms.

Ayurvedic texts do not describe a disease entity that fully corresponds to PCOS, though aspects of the syndrome are reflected in different contexts within the classics. According to Ayurvedic understanding of diseases, no disease ever occurs without the vitiation of *tridosha* (SAT-B.383). [3] The same *dosha* (regulatory functional factors of the body) (SAT-B.382) can lead to innumerable diseases based on the specific etiological factors (*samutthanavishesha*) and the sites affected (*sthanantaragata*), making it impossible for any text to name and describe every such variation. [4] Thus, while classics detail the common diseases of their time, they also anticipate the emergence of newer diseases— unnamed or undescribed in *samhita*, with passage of

time. According to Charaka *samhita*, when a physician comes across such an *anukta vyadhi* (unnamed diseases/ a condition not explicitly mentioned in the Ayurvedic texts), he is advised to initiate treatment after identifying the three important aspects of the disease, namely- '*vikaraprakrti, adhishtanantarani and samutthanavishesha*'. [5, 6] Here, '*vikaraprakrti*' implies *vatadi dosha* (SAT-B.383) involved in the disease. [7,8] '*Adhishtanantarani*' refers to *rasadi dhatu* (major structural components of the body) (SAT-B.425) and other organs/ structures vitiated in the particular disease, [9] and '*samutthanavishesha*' refers to the etiological factors that lead to vitiation of the specific *dosha/ dhatu*. [10, 11]

This review attempts to understand Polycystic Ovary syndrome in the light of Ayurvedic principles. It demonstrates how Charaka's protocol- commonly referred to as '*Trividha Bodhya Sangraha*' can be applied to decode an *anukta vyadhi*, using PCOS as a prototype. By applying this lens to PCOS, it also aims to create a model for approaching other modern, unnamed conditions within the Ayurvedic framework.

2. METHODS

In *anukta vyadhi*, the key to identifying *dosha* (*vikaraprakrti*) and *dhatu/ashaya* (*adhishtanantarani*) lies in clinical features (*lakshana*). Once these are established, the specific etiological factors (*samutthanavishesha*) can be traced from the many *nidana* (SAT-C.58) that vitiate the particular *dosha* or *dhatu*. Accordingly, each clinical feature of PCOS was examined in light of Ayurvedic concepts through a conceptual search across major classical texts—Charaka

Samhita, Sushruta Samhita, Ashtanga Hridaya, and Kashyapa Samhita—along with commentaries. Where multiple contexts were possible, the interpretation most consistent with the full spectrum of PCOS features and pathophysiology was selected. A comprehensive understanding of PCOS was developed by reviewing standard endocrinology textbooks, clinical guidelines, and peer-reviewed articles.

Relevant literature was searched through PubMed. Separate searches were performed for each key aspect of PCOS such as prevalence, acne vulgaris, acanthosis nigricans, metabolic profile in non-obese women etc by

combining “polycystic ovary syndrome [Title] OR PCOS [Title]” with the respective term using AND to retrieve relevant articles. For the prevalence search, results were limited to English-language studies published between 1990 and 2024. No time restriction was applied to the other searches. The retrieved studies were screened for relevance, and highly cited or population-based studies were prioritized. Google Scholar was used for cross-checking citation frequency. Key findings were synthesized to describe clinical features and pathophysiology.

Table 1: Keyword Search Strategy

Database / Source	Search Terms Used	Filters Applied	Results Retrieved	Notes
PubMed	polycystic ovary syndrome[Title] OR PCOS[Title] AND prevalence[Title]	1990-2024 English	245	large population based studies selected. Highly cited studies chosen after crosschecking in google scholar.
PubMed	polycystic ovary syndrome[Title] OR PCOS[Title] AND Acne vulgaris	English No time restriction	267	Relevant studies describing prevalence and mechanisms of acne in PCOS were reviewed
PubMed	polycystic ovary syndrome[Title] OR PCOS[Title] AND Acanthosis nigricans	English No time restriction	75	Information on prevalence and morphological features of acanthosis in women with PCOS was extracted to support clinical correlation
PubMed	polycystic ovary syndrome[Title] OR PCOS[Title] AND lean[Title] OR nonobese[Title]	English No time restriction	2662	Reviewed studies on metabolic profile of non-obese women with PCOS, especially with reference to visceral fat distribution, lipid abnormalities, and insulin resistance,

Analysis of Clinical features to derive the ‘Vikaraprakrti, Adhishtanantarani and Samutthanavishesha’-

Polycystic ovary syndrome has a highly heterogeneous presentation with one, all, or any combination of-

- Oligomenorrhea, Amenorrhea, Prolonged erratic menstrual bleeding, Infertility (Signs of chronic anovulation)
- Hirsutism, Acne & Androgenic alopecia (Signs of Hyperandrogenism)

- Acanthosis nigricans (Sign of Insulin resistance)
- Obesity
- Polycystic ovarian morphology (USG finding)

Menstrual Irregularities in PCOS: Ayurvedic Interpretation of Oligo-Amenorrhea and Irregular Bleeding

In women with PCOS, menstrual dysfunction may range from amenorrhea to oligomenorrhea to episodic menometrorrhagia with associated iron-deficiency anemia. The underlying pathology in most of these cases is chronic anovulation, leading to the absence of progesterone. In the absence of this progestogenic influence, withdrawal bleeding is not triggered, resulting in prolonged exposure of the endometrium to unopposed estrogen. This causes sustained mitotic stimulation of the endometrial lining, and the instability of this thickened endometrium leads to erratic, unpredictable bleeding. [12, 13]

While classical Ayurvedic texts do describe various forms of menstrual abnormalities, PCOS does not align exactly with any single condition among these. Hence, a pathophysiological approach is first employed to derive the *vikaraprakṛti* by examining the spectrum of bleeding patterns in PCOS through the lens of *doṣha* (SAT-B.382) and *dhatu* (SAT-B.425) interactions across the menstrual cycle.

According to the Ayurvedic understanding, a normal menstrual cycle can be divided into three phases-

Rajasrava kala (Phase of menstrual flow)- The menstrual blood collected for one month is brought through two *dhamani* (artery) to *yoni* (female reproductive organs) (SAT-B.128) by *vayu* (SAT-A.182).

[14] Expulsion of *artava* (menstrual blood) (SAT-B.453) is the function of *apanavata* (subtype of *vata dosha*) (SAT-B.392). [15] Hence, this phase of the menstrual cycle is dominated by *vata dosha* (SAT-B.384).

Rutukala (Fertile period/ Ovulatory phase)- (4th to 15th day of the cycle) is the stage of formation of *artava* (proliferation of endometrium) (SAT-B.453). According to Chakrapani, *artava* (SAT-B.453) is formed from *rasa* (primary product of digested food) (SAT-B.428), and hence is *soumya* (cooling) during its formation (*avirbhava*), but later becomes *agneya* (igneous) by *parinama* (transformation) (*tirobhava*). [16] Hence, *rutukala* is dominated by *kapha dosha*.

Rutuvyateetakala (Post Ovulatory phase)- After *rutukala* (i.e, in the later half of menstrual cycle), *artava* gradually becomes *agneya* by *parinama/ paka* (digestion or transformation) (SAT-B.497). *Paka* (SAT-B.497) is the function of *pitta*. This can be compared to the thermogenic action of progesterone in secretory phase. Hence, *rutuvyateetakala* is dominated by *pitta dosha*.

Looking at the state of the endometrium in PCOS with this background in mind- In PCOS, although the formation of *artava* (*avirbhava*) does happen, the subsequent progestogenic *paka/ parinama* (transformation) doesn't occur. In Ayurvedic terms, any substance that fails to undergo proper transformation is considered 'ama' (incompletely transformed material) (SAT-C.90). [17] Hence, this *apakva artava* (incompletely transformed *artava*) may be interpreted as a type of *ama*, and is the result of *mandya* (feeble state) of *rasa dhatvagni* (SAT-B.491) (bodily fire located in *rasadhatu*

that transforms *rasadhatu* into *rakta* and *artava*). Thus, in the woman with PCOS, the *kapha* predominant *rutukala* prevails, and is not followed by *pitta* dominant *rutuvyateetakala*. The *artava* ((SAT-B.453), which ideally should have undergone *parinama* (SAT-B.497), and subsequent expulsion under the influence of *apana vata* (*one of the five subtypes of vata, situated in the pelvic region*) (SAT-B.392), remains unprocessed, and unexpelled. Had proper *paka* (metabolic transformation) (SAT-B.497) occurred, *vata* (*dosha* (SAT-B.384) would have naturally assumed its function and expelled the processed *artava* (SAT-B.453), much like it handles digested food. This *apakva* (untransformed) *artava* remains stagnant, and may later lead to erratic, unpredictable bleeding once it builds up.

Thus, menstrual irregularity in PCOS appears to be the clinical expression of *rasadhatvagnimandya* (sluggish metabolic transformation at the level of *rasa*) and *margavarana* (channel obstruction). Here, the prevalent *dosha* (*vikaraprakrti*) is evidently *kapha*, which expresses as *rasadhatvagnimandya* and *margavarana*. The *adhishtana* are *rasa* and *artava* (SAT-B.453).

In an attempt to see if any of the instances of menstrual irregularities mentioned in ayurvedic classics fit into this pathophysiological pattern of menstrual irregularities, it can be seen that oligo-amenorrhea is described as the result of diverse pathological processes such as *ksheenartava dushti* (EL-3), *yonivyapat like arajaska* (EL-2.9), *lohitakshaya* (EL-2.13), *vandhya* (EL-2.24) and *shandi* (EL-2.25), *artavakshaya* (BA-3.1), *artavanasha*, *artavastambha*, *raktagulma* (EB-8.5), *artavavahasrotomoolavedha* etc.

Among all of these conditions, considering the pathogenesis and associated features of each condition, *artavastambha* described in Ashtanga samgraha,[18] and *margavarana* described by Sushruta and Vagbhata, seem to be closer to the oligo-amenorrhea of PCOS. [19,20] Both these conditions are associated with *atisantarpana* (excessive nourishment) and *margavarana* (channel obstruction). *Margavarana* and *rasadhatvagnimandya* are often co-existing conditions as explained in *sthoulya* (ACB-1) *samprapti* (pathogenesis of obesity). [21] *Pittala upachara* (practises that aggravate *pitta*) is advised in *artavanasha*, which may improve the *rasadhatvagni*. [22] These conditions can also be associated with endometrial hyperplasia and irregular bleeding- as Dalhana clarifies that *artavanasha* may not imply complete absence of formation of *artava*, but rather the absence of outward flow. [23] This aligns with the phenomenon of unopposed estrogen stimulation and subclinical endometrial proliferation seen in PCOS.

Astanga Sangraha also states that prolonged accumulation of *artava* (SAT-B.453) due to its non-expulsion may lead to *raktagulma* ((EB-8.5). [24] This stagnant mass can potentially result in *raktayoni* (intermittent menorrhagia) (EL-2.21), as described by Indu, which mirrors the unpredictable breakthrough bleeding from the unstable endometrium in PCOS. [25]

Infertility in PCOS – An Ayurvedic Perspective

Infertility in PCOS is primarily due to chronic anovulation. According to Ayurvedic texts, the combination of four factors are responsible for formation of *garbha* (SAT-B.376) namely- *rutu* (the

woman's ovulatory period), *kshetra* (*garbhashaya*-uterus SAT-B.244), *ambu* (*rasadhatu* formed from digested food) and *beeja* (sperm and ovum) (SAT-B.449). [26] Among these, the absence of *beeja* (SAT-B.449) due to anovulation leads to the infertility seen in PCOS.

Looking at anovulation in the light of Ayurvedic concepts to derive the *dosha* and *dhatu* associated with it- it can be found that in the Ayurvedic texts, the term "artava" (SAT-B.453) is used variably to denote both menstrual blood and ovum. To differentiate them conceptually, we may refer to menstrual blood as *pushpartava* and the ovum as *beejartava*. From this lens, "artava-apravritti" as described in *margavarana-janya artavanasha*, can be interpreted as encompassing both *pushpa-apravritti* (amenorrhea) and *beeja-apravritti* (anovulation). Thus, anovulation in PCOS can be interpreted as a *artava-apravritti* itself, due to *margavarana-janya artavanasha* as discussed in case of amenorrhea. This again roots back to *rasadhatvagni mandya*, where the transformation of *rasa* into a fully functional *artava* (SAT-B.453) (both *pushpa* and *beeja*) does not occur, leading to accumulation rather than timely expulsion.

Thus, infertility, like menstrual irregularity, is another clinical expression of the same underlying *kapha*-dominant pathology with *rasa dhatu* (SAT-B.428) and *artava* (SAT-B.453) as the *adhithana*.

Hirsutism in PCOS – An Ayurvedic Perspective

Hirsutism refers to the presence of terminal hair in females in a pattern typically seen in postpubertal males. Clinically one sees variable amounts of terminal hairs on sites associated with male secondary sexual

development such as- upper lip, chin, chest, upper back, lower back, upper abdomen, lower abdomen, upper arms and thighs. While the *brihatrayi* texts do not describe this presentation explicitly, certain classical terms and concepts offer interpretative clues. Terms such as *atiloma* (person with excessive body hair - one among *ashtounindita*), *varta* (*striyakritibhooyishtam astri*-female with incomplete feminine features), [27] provide a rudimentary correlation to the concept of abnormal or male-pattern hair growth in women. A more specific parallel is found in Kashyapa Samhita, which describes a condition called *Pushpaghni Jataharini*. This disorder is marked by *vritha pushpam* (futile menstruation, possibly anovulation), *sthoulya* (obesity) (ACB-1) and *lomashaganda* (hairy cheeks comparable to hirsutism), a combination that closely aligns with the features seen in PCOS—anovulation, obesity, and hirsutism.

While Kashyapa does not detail the *dosha* and *dushya* (which gets vitiated) (SAT-B.424) involvement in *Pushpaghni*, its association with *sthoulya* (ACB-1) suggests the predominance of *kapha* and *meda* (fat tissue) (SAT-B.435). The mechanism by which *sthoulya* (ACB-1) or *kapha-medo dushti* may lead to hirsutism is unclear. But, it is known that *margavarana* in *sthoulya* has an impact on reproductive endocrine system. In the description of *ashta doshas of sthoulya* (ACB-1), it can be found that *sthoulya* (ACB-1) leads to *alpashukratva* (diminished *shukra*) (SAT-D.991) and *krichravayavayata* (difficulty in sexual activity). [28,29] This implies that *shukradhatu* (SAT-B.445) suffers qualitative and functional compromise in *sthoulya* (ACB-1). In

Ayurveda, *shukra dhatu* (SAT-B.445) is not only linked to fertility but also to all the hormonal and physiological expressions that constitute sexual identity and secondary sexual features, including hair distribution. [30] Therefore, the hormonal mechanisms that define femininity or masculinity fall under the domain of *shukradhatu* (SAT-B.445). When *kapha-medovridhi* causes *margavarana* at the level of *shukradhatu* (SAT-B.445), it may interfere with its normal expression. This could lead to altered expression of gender-specific traits, such as the development of male-pattern hair growth in women.

Hence, with respect to hirsutism, *kapha* and *meda* (SAT-B.435) appear to be the predominant *doshas* involved, while *shukra dhatu* (SAT-B.445) is the key *dushya* (SAT-B.424), with *margavarana* as the primary mechanism. The *adhithana* for this manifestation may be understood as *romakupa* (hair follicles)- under the influence of *shukradhatu* (SAT-B.445).

Androgenetic Alopecia in PCOS – Ayurvedic Perspective

Androgenetic alopecia is a progressive, non-scarring, patterned loss of scalp terminal hairs. Male pattern baldness resembles the description of *khalitya* (FA-3) in Ayurvedic texts. Here, *pitta* situated in *romakupa* (hair follicles), along with *vata* causes hairfall, thereafter, *kapha* and *rakta* (blood tissue) (SAT-B.429) cause obstruction at the hair follicle, preventing new hair growth. [31] Gayadasa offers a notable comment here- *khalitya* (FA-3) typically occurs only in men and not in women. This is because there is less chance for hairfall in women by *vata pitta- prakopa* (provocative stage) (SAT-C.146) as they are relatively *avyaparita* (inactive).

[32] Even if hair falls, new hair grows in its place as *srotavarodha* (obstructive pathology occurring in channels)(SAT-C.159) doesn't occur in women due to *rajovimukti* (periodic menstrual bleeding). Interestingly, in PCOS, *khalitya* (FA-3) is associated with absence of menstruation (*rajovimukti*) in women. This highlights the unique pathology of PCOS wherein *kapha*-induced *margavarana* becomes the critical factor—blocking the channels and inhibiting the regrowth of hair despite the natural regenerative tendency seen in females.

Thus, the pathogenesis of female androgenetic alopecia in PCOS aligns well with the same mechanism of *margavarana* discussed in other manifestations such as anovulation, amenorrhea, and hirsutism. The obstructive role of *kapha* becomes central, making it the predominant *dosha* in the *vikaraprakrti* here too, with *romakupa* as the *adhishthanantara*.

Acne in PCOS – An Ayurvedic Perspective

Acne is a chronic inflammatory condition of the pilosebaceous units, and is seen in nearly one-third of women with PCOS. It often results from increased sebaceous gland activity, a hallmark feature of the androgen excess associated with PCOS, and this correlates with the severity of acne. [33]

The description of acne closely resembles *mukhadushika* (O-35), classified under *kshudraroga* (minor diseases) by *Sushruta* and *Vagbhata*. These lesions are described as boil-like eruptions like the thorns of the *shalmali* tree (*Salmalia malabarica*), predominantly appearing on the face of young individuals. They are painful and are *medogarbha* (filled with sebum) —indicating their sebaceous origin.

Sushruta attributes the pathology to *kapha*, *vata*, and *rakta*, while Arunadatta emphasizes *vata-kapha* predominance. [34,35]

Sharngadhara further adds that *pindika* or *yuvanapidaka* (another term for acne) is to be understood as a *mala* (waste product) of *shukradhatu* (SAT-B.445). [36] This suggests that the state of *shukra dhatu* (SAT-B.445) metabolism and its by-products may have a role in the manifestation of acne, especially in hormonally active years.

In the context of PCOS, the *kapha* and *meda dushti*, seen consistently across its manifestations, again seems central. The vitiated *kapha* and *meda* lead to blockage of the channels of sebaceous glands. Thus, *mukhadushika* (O-35) in PCOS can be seen as a localized manifestation of *kapha-medovaha srotodushti*, with *vata* and *rakta* contributing to pain and inflammation, and the pilosebaceous unit (specifically on the face) being the *adhithana*.

Acanthosis nigricans

Acanthosis nigricans (AN) is a cutaneous marker of insulin resistance that is also associated with PCOS which is characterized by hyperkeratosis, papillomatosis, and increased pigmentation. It occurs in up to 5% of women with PCOS. [37,38,39,40] The papillomatosis gives the skin a velvety contour. Plaques most often occur in the axillae, the nape of the neck, under the breasts, and in the flexures. A condition that exactly fits the description of acanthosis isn't available in *samhita*. Considering various conditions in *samhita* that can show a similar presentation including varieties of *kushta* (integumentary disease) (ED-4) like *charmakushta* (ED-

4.3.2), *ekakushta* (ED-4.3.1) etc, the hyperkeratosis and papillomatosis of acanthosis is found to be most comparable to *kacchapika*- a type of *prameha pidaka* (EF-2.5) (carbuncles)- which is described to be similar to tortoise shell in texture. [41] Charaka clearly states that *pramehapidaka* (EF-2.5) are the result of *medodushti* (vitiation of adipose tissue), and need not always be associated with *prameha* (diabetes mellitus) (EF-2). [42] Hence, as in case of other clinical features, Acanthosis too is found to be a manifestation of *kapha-medodushti*.

Obesity in PCOS – An Ayurvedic Perspective

The association between PCOS and obesity has been evident since the earliest clinical descriptions of the syndrome. A significant proportion of women with PCOS present with obesity, particularly central (visceral) adiposity, which has far-reaching metabolic and reproductive consequences. These include insulin resistance, anovulation, infertility, miscarriage, and increased risk for type 2 diabetes and cardiovascular disease. While the exact cause of obesity in PCOS remains uncertain, its amplifying effect on clinical severity is well established.

In Ayurvedic literature, obesity is described as *sthoulya* ((ACB-1) —a condition caused by *kapha-var dhaka nidanas* (factors that aggravate *kapha*), hereditary factors (*beejaswab hava*), or unknown and unmodifiable influences (*adr̥ṣṭavasat*), leading to the abnormal and excessive accumulation of fat tissue (*medovrd dhi*) and *margavarāṇa* (obstruction of bodily channels).

Sthoulya (ACB-1) leads to various detrimental effects on the person's health including inadequate formation and

dysfunction of *shukra* (reproductive elements), causing impairment in reproductive functions. [43] This correlates with the higher incidence of menstrual irregularities and infertility seen in obese women with PCOS. Moreover, the *samhitas* warn that untreated *sthoulya* (ACB-1) predisposes individuals to serious disorders, including *prameha* (a group of urinary and metabolic disorders, including diabetes mellitus) (EF-2) and other serious *vatavikara* (diseases caused by *vata*) *sthoulya* (ACB-1),-which aligns closely with the modern understanding of obesity as a risk factor for metabolic syndrome and cardiovascular morbidity.

The central role of *kapha* in the pathogenesis of *sthoulya* (ACB-1) is clear. *Kaphavridhhi* initiates the process, while *margavarana* impairs circulation of *vata*, leading to *vata prakopa* (SAT-C.146). This *samprapti* of *sthoulya* ((ACB-1)), fits seamlessly into the broader *margavarana*-based pathology of PCOS, providing a common ground for understanding its diverse clinical features.

Polycystic Ovarian Morphology – An Ayurvedic Interpretation

In PCOS, ovarian morphology often shows bilateral (occasionally unilateral) rounding and enlargement of the ovaries. [44] Classically described as having an oyster white surface resembling a capsule, the ovaries exhibit subcapsular cysts that appear as sago-like bodies—a hallmark ultrasonographic finding in PCOS. [45] However, such imaging-based observations are absent in Ayurvedic literature, as ultrasonography was not available during the *Samhita* period. The cysts

observed in PCOS are immature follicles, not pathological cysts.

The rounded and enlarged ovaries seen in PCOS may be interpreted as *medoja granthi* (*granthi due medas*) (EE-4.4)—cystic formations of fatty origin that grow larger when the patient gains weight, [46]—particularly given the strong association of PCOS with *sthoulya* (obesity) (ACB-1). The fact that weight reduction improves both cystic morphology and ovulatory function supports this interpretation.

3. DISCUSSION

From the Ayurvedic analysis of the diverse clinical features of PCOS—hirsutism, acne, alopecia, obesity, menstrual irregularities, and ovarian morphology—a consistent pattern of *kapha-vriddhi* (*kapha aggravation*) (ACA-2), *medo-dushti* (*vitiating of medas*) (BD) emerges. Central to this pathogenesis are *rasadhatvagnimandya* and *margavarana* (*channel obstruction*), which appear to underlie the core dysfunction in PCOS as understood through Ayurvedic principles.

Vikaraprakrti- The primary *dosha* involved in the disease is *kaphadosha*. There can be secondary involvement of *vata* and manifestation of various *vataroga* in course of time according to the degree of *margavarana*.

Adhishthanantarani- The primary *srotus/ dhatu* involved are *rasa* and *medas* which can ultimately cause *dushti* of *artavavaha* (SAT-B.474) and *shukravaha srotas* (SAT-B.485).

Samutthanavishesha- As the disease predominantly involves *kaphadosha* and *rasa- medo dhatu*, relevant

etiological factors under *doshabala nidana* (etiological factors that cause disease by vitiation of *dosha*) include-

- all kinds of *kaphavriddhikara -santarpana ahara vihara* (excessively nourishing food and regimen), such as *navanna* (newly harvested rice) , *paishtika* (prepared from flour of grains), *madhura* (sweet), *amla* (sour), *guru* (heavy), *snigdha* (unctuous), *abhishyandi ahara* (food which increases secretions and obstructs channels of circulation), *masha* (black gram), *dadhi* (curd), *anupa mamsa* (meat of animals inhabiting marshy land) *audaka mamsa* (meat of aquatic animals), *avyayama* (lack of exercise) etc. [47,48]
- *rasavaha srotodushti nidana* (which includes *chintyanam atichintana-* overthinking and stress, in addition to intake of *ahara* which is- *guru-* heavy, *sheeta-* cold, *atisnigdha-* excessively unctuous, *atimatra ahara-* food in excessive amount). [49]
- *medodushti nidana* (*avyayama-* sedentary lifestyle, *divasvapna-* day sleep, *medyanam atibhakshana-* intake of fatty food, intake of *varuni madya*(Fermented alcoholic beverage prepared from jaggery). [50]

In addition, as the probable *samprapti* (pathogenesis) (SAT-C.123) of the disease seems to closely resemble that of *sthoulya* (ACB-1), *beejadushti* (genetic predisposition) can be a strong risk factor for the disease as in *sthoulya* (ACB-1). [51]

Taken together, PCOS appears to be a disorder characterized primarily by *kaphavrdhhi*, *medodushti*, and *margavarana*, with secondary involvement of *vata* depending on severity. This understanding supports a

line of management which is *margavarana-hara*, *pittala*, *apatarpana*, and *medohara*.

Recent studies have reported positive outcomes with Ayurvedic interventions which are *kapha- medohara* and *margavarana hara*, showing improvement in cycle regularity, weight reduction, and hyperandrogenic symptoms. [54, 55, 56]

Obese & Lean PCOS

Although a majority of cases with PCOS are obese/ overweight, a small but significant proportion of patients present with normal body mass index. These cases are termed as lean PCOS. Both lean and obese women with PCOS were found to be hyperinsulinemic and insulin resistant compared to weight matched control subjects, but insulin resistance is most pronounced among obese women with PCOS. Visceral fat is closely linked to insulin resistance and PCOS, even in lean PCOS women. Serum triglycerides and fasting insulin were correlated to visceral fat but not subcutaneous fat in lean PCOS, as well as higher low-density lipoproteins (LDL) and lower high-density lipoproteins (HDL). [52]

Hence, although the patient isn't *sthoula* (obese) in this case, *kapha- medo dushti* (vitiation of *kapha* and *medas*) itself can be considered as the underlying pathological process in lean PCOS. *Medovrdhhi* in these individuals is predominantly in the form of *abaddha medas* (unbound/ free/ circulating form of fat) as described in *samprapti* (SAT-C.123) of *prameha* (EF-2), [53] and not as *baddha medas* (bound/ compact form of fat).

4. CONCLUSION

The etiopathogenesis of Polycystic ovary syndrome can be understood as a unique variant of *sthoulya samprapti* (pathogenesis of *sthoulya* (ACB-1) that manifests in women of reproductive age, leading to menstrual and reproductive abnormalities. A common link of *kaphavrddhi*, *medodushti* and *margavarana* is evident in all clinical features of the syndrome. The primary *dosha* involved in the disease is apparently *kaphadosha*. There can be secondary involvement of *vata* and manifestation of various *vataroga* in course of time according to the degree of *margavarana*. *Rasadhatvagnimandya* and *margavarana* seem to be the central pathological entities involved in PCOS. Hence, a general treatment plan consisting of diet, regimen, drugs and procedures which are *Kaphavatahara*, *margavarana*, *apatarpana*, and *medohara* should be useful in management of the condition.

Authors Details:

^{1*}Assistant Professor, Department of Roga Nidan evam Vikriti Vigyan, Mannam Ayurveda Cooperative Medical College, Pandalam, Kerala 689501

²Professor and HOD, Department of Roga Nidan evam Vikriti Vigyan, SDM College of Ayurveda, Hospital and Research Center, Udipi, Karnataka 574118

Authors Contribution:

Conceptualization and design of the study- Dr. RV, Dr. NS

Data Collection and literature search: Dr. RS

Writing -Original Draft: Dr. RS

Revising & Copyediting: Dr. RV, Dr. NS

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