Original Research Article

A Survey Study to Evaluate the Causative Factors of PCOS and Its Ayurvedic Interpretation

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ABSTRACT

Background: Polycystic ovarian syndrome is one of the most common female endocrine disorders which are emerging as the major cause of infertility. *Nidanas* (causative factors) are considered as *Moola* (root) for manifestation of disease and based on this, presentation of PCOS will vary. Materials and **Methods:** Special case proforma was prepared to elicit the causative factors of PCOS based on information available in Ayurvedic texts, modern science and respective journals. 100 diagnosed cases of PCOS, fulfilling the inclusion criteria, were selected. **Result:** Causative factors of PCOS were analyzed and divided in to *VataPrakopakara, Pitta Prakopakara*, *Kapha Prakopakar*a and *Tridosha Prakopakara Nidana*. **Conclusion:** In this present study of 100 subjects, most important *Aharaja Nidanas* elicited were as follows -*Anashana*, *VidahiAhara*(samosa, puffs, Panipuri, Oily food and burger), *Vishamashana*, *AtiMadhuraaharasevana*, *AtiMamsaahara, Katuahara*most important *Viharas* observed were *Avyayama*, *Divaswapna*, *Ratrijagarana*, *Mootravegadharan*a and stress. These all *Nidanas*(causative factors)are considered as improper daily routine and food habits, thus regarded as causative aspects of PCOS.
Keywords: Ayurveda, Causative factors, Nidana, PCOS, Prakopa

INTRODUCTION

Polycystic ovarian syndrome (PCOS) is one of the most common female endocrine disorders which are emerging as the major cause of infertility.10% of the women of the reproductive age is diagnosed with PCOS, while among this 10%; approximately 80% had the clinical presentation of infertility.[1] PCOS is defined as presence of chronic anovulation and hyperandrogenism.[2] It is characterized by the presence of menstrual irregularities, infertility, hirsutism, acne, hair loss, hyper and rogenism, central obesity and dyslipidaemia with a higher risk of developing diabetes mellitus, endometrial hyperplasia and cardiovascular diseases.[3] In Ayurveda Hetus (causative factors)got primary importance and considered as root cause for disease. *Nidana Parivarjanameva* is stressed in *Ayurveda as Chikitsa.* If *Nidanas* are enlisted or identified first then we can plan an appropriate treatment. Hence here attempt is made to identify the causative factors of PCOS and its *Ayurvedic* interpretation.

Aims And Objectives
To study the etiological factors of PCOS, according to the Samhitasand modern lifestyle.

MATERIALS AND METHODS

The survey was conducted on 100 patients of PCOS from OPD and IPD of SDM college of Ayurveda and Hospital,

Hassan after receiving Institution Committee approval (Ref. No. SDM/IEC/68/2017-2018). The causative factors were assessed by using specially prepared case sheet. The data was collected and results were analyzed.

Inclusion Criteria:

1. Diagnosed cases of polycystic ovarian syndrome as defined by ROTTERDAM criteria [4]

2. Age between 15-40 years

Exclusion Criteria:

1. Subjects with other functional and structural pathology of reproductive organs

2. Abnormal menstrual cycle not due to PCOS confirmed by USG

Statistical analysis:

The data was tabulated and subjected to statistical analysis with the help of IBM Statistical Package for Social Sciences v20.statistical test was done.

OBSERVATION AND RESULT

In this study N=100, Among the Nidanas, Vataprakopakara Nidanas were listed below. Katu Aharasevana (15%), Vegadharana (43%), Abhojana (46%) and Ratrijagarana (50%). Pitta Prakopara Nidanas were Vidahi Aharas like (Puffs-35%, Samosa (32%) and oily foods(17%). Atimamsasevana (25%), Late waking up (28%), Madhura Ahara (33%), Divaswapna (61%) and Avyayama (73%) were considered as Kapha Prakopakara Nidana. These causative factors were statistically significant.

Table 1: VataPrakopakaraNidanawise distribution of 100 subjects of PCOS

VataPrakopakaraNidana	Percentage	P value	Interpretation
Abhojana	46	.003	significant
KatuAharaSevana	15	.002	Significant
MootraVegadharana	43	.002	Significant
Chinta (stress)	46	.001	Significant
RatriJagarana	50	.002	Significant

Table 2: Pitta PrakopakaraNidanawise distribution of 100 subjects of PCOS

Pitta PrakopakaraNidana	Percentage	P value	Interpretation
Puffs	35	.001	Significant
Samosa	32	.004	Significant
Oily foods	17	.002	Significant

Table 3: KaphaPrakopakaraNidanawise distribution of 100 subjects of PCOS

KaphaPrakopakaraNidana	Percentage	P value	Interpretation
Burger	12	.001	Significant
AtiMamsasevana	25	.002	Significant
Late waking up (8 am and onwards)	28	.001	Significant
MadhuraAhara	33	0.01	Significant
Diwaswapna	61	.036	Significant
Avyayama	73	.002	Significant

Table 4: Vata-PittaPrakopakaraNidanawise distribution of 100 subjects of PCOS

Vata-Pitta PrakopakaraNidana	Percentage	P value	Interpretation
Masala Puri	14	.001	Significant
Churmuri	17	.002	significant
Bhelpuri	19	.002	significant
Panipuri	35	.004	significant
Gobimanchurian	49	.920	Not significant

DISCUSSION

On causative factors of PCOS with Ayurvedic interpretation

Discussion on VataPrakopakaraNidana

RatriJagarana: It was seen as one of the potential causative factor in 50% of the subjects. Keeping awake up to 12 am and working in night shifts were considered as *Ratri Jagarana* in this study. *Ratrou jagaranaruksham".* [5] *Vataprakopa* occurs due to its *Ruksha Guna* which was evident causative factor for PCOS and it can cause *Rukshata* of *Artava* and this may lead to scanty menstruation.

Abhojana: It was observed as causative factor in 46% of the subjects. *Anashanamalpabhojanamva.*[6] In this study, *Anashana* (not taking of food, skipping of food), *Alpabhojanam* (intake of less quantity of food) was considered as *Abhojana.* Due to this causative factor *Vata* gets *Prakopa* and this can be a cause for *Ksheena Artava* which is an important symptom in PCOS.

Mootra Vegadharana (suppression of natural urges): It was observed in 43% of the subjects. *Mootra Pravratti* is under the control of *Apanavata* and the same is responsible for *ArtavaPravratti.* When the *Mootra Vegadharana* is done it vitiates the *Apanavata* because of which *Artava Pravratti*is also affected.[7] So, vitiation of *Apanavata* can cause *Ayathakala Artava Darshana* (irregular menstrual cycle)which is one of the important symptom of PCOS.

AtiKatuAhara Sevana (excessive intake of spicy food): It was observed in 15% of the subjects which is the causative factor for *VataPrakopa,*[8] which leads to *Artavadushti* in PCOS.

Atichinta (Stress): This study shows 28% of the subjects were under stress. Educational stress, work stress and family stress were observed more in this study. Increased stress leads to hormonal changes like raised levels of cortisol and prolactin and affects the normal menstrual cycle.[9] This leads to *Vata Prakopa* and also cause *Rasavaha Sroto Dushti,* as *Artava* is *Upadhatu* of *Rasa.* Hence *Rasa Dushti* results in *Artavavaha SrotoDushti.*

Discussion on Pitta PrakopakaraNidana
Vidahi Aharas (food gets burnt after eating and causes burning sensation): In this study samosa: 37%, puffs: 35%, oily foods: 17%, Burger- 12% was considered and observed as *Vidahi Ahara.* Obesity is the harmful result of burger which plays a very important role in manifestation of this particular disease also.[10] These causative factors can be taken as junk Food. This is main causative factor for *Pitta Prakopa* and *Rakta Dushti.* The preservatives and artificial colours both acts as *Garavisha* (artificial poison) and *Dooshivisha* (latent poison) which does the *Kaphavrita* in *Koshta* and stays in body for many years.[11] *Kaphavrita Vata* can be correlated with PCOS. Junk food contains high sugar content and most of them are prepared with refined wheat flour, sugar, additive oils, and fats. This can leads to an imbalance in glucose level which disturbs hormonal levels. The fat contains high cholesterol level. High calorie content with sugar can lead to obesity.[12] Obesity is one of the important symptom or complication in PCOS. In this study 77% of the subjects were having weight gain as main symptom.

Discussion on KaphaPrakopakaraNidana
Avyayama: Lack of physical activity and exercise, often sitting or lying down while engaged in activity like reading, watching TV, playing video games or using mobile phone for much of the day was considered as Avyayama in this study. This is one of the increasing causative factor for most of non communicable diseases including PCOS. Current study shows that, it is one of the major causative factors in 73% of the subjects. It vitiates the *KaphaDosha* and does the *Dooshana* of *Rasavaha Medavaha Srotas.*[13] *Avyayama* is a *Hetu*(causative factor)for *Agni Dushti* also. This vitiates the *Tridosha.* Because of these causative factors, it will worsen the condition of PCOS.

Divaswapna (Day sleep): In this study, it was observed that 63% of the subjects practiced *Divaswapna.* It is main causative factor for *Kapha Prakopa. Divaswapna* (day sleep) increases *Snigdhatva* in body and thereby it does the *Dooshana* of *Medas.* It vitiates *Rasavaha, Mamsavaha* and *Medovaha Srotas.*[14] *Sthoulya* (obesity) is *Kapha* and *Medo Pradhana Vyadhi* and this is observed in PCOS which is an important finding.

Waking up late (8 am and onwards): This trend has been observed in 28% of the subjects. In *Ayurveda,* the time to wake up is told as *Brahmi Muhurta* which is nearly

48 minutes before sunrise. After *Brahma Muhurta*, *Kapha Kala* begins, *Kapha* along with *Tama* blocks the *Srotas*. It is the time of highest peak of hormonal actions like cortisol, FSH, LH. Cortisol is the byproduct of cholesterol when secreted abnormally suppresses the level of LH, Estradiol production and it is indirectly affected the menstrual cycle. Waking up in *Brahmi Muhurta* prevents most of the endocrinal diseases like PCOS.[15]

Madhura ahara ati sevana (Excessive intake of sweets): It was observed in 33% of the subjects. It has *Guru Guna* and *Sheetaveerya* due to this property it does the *KaphaPrakopa*, *Rasavaha* and *Medovaha Sroto Dushti*.[16] This is the cause for *Sthoulya* in PCOS.

Mamsaahara ati sevana (Excessive intake of non veg): It was observed in 25% of the subjects. In general Mamsa possesses *Guru Guna, Madhura Rasa* and *Sheetaveerya.* Hence it is*Brumhaneeya* and *Shleshma Vardhaka.*[17] This is main cause for Sthoulya in PCOS.

Discussion on Tridosha Prakopakara Nidana

Vishamashana: The food taken untimely which is taken either excess or low is considered as *Vishamashana*.[18] It was main causative factor in 36% of the subjects. And it is considered as one of the important *Agni DushtikaraBhava*.[19] It is main *Hetu* for *Tridoshaprakopa* which is a cause for *Artava Dushti* leading to PCOS.

CONCLUSION

In this present study of 100 subjects, most important *AharajaNidanas* elicited were as follows -*Anashana*, *Vishamashana*, *Ati Madhura ahara sevana*, *Ati Mamsa ahara sevana*, *Katu ahara sevana*, most important *Viharas* observed were *Avyayama*, *Divaswapna*, *Ratrijagarana*, *Mootravegadharan*a and stress. These are *Vata Kaphavardhaka Ahara Vihara* and considered as *Vishesha Nidana* and can be taken as *Vyadhi Hetu* (which are responsible for the development of specific disease by

specific etiology) for PCOS. These all *Nidanas* are considered as improper daily routine and food habits. Knowledge of Nidanas are necessary to understand etiopathogenesis and management of PCOS.

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