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## Role Of Basti In Polycystic Ovarian Syndrome: A Review

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### ABSTRACT

PCOS known as metabolic endocrinological condition which primarily affects women in reproductive age. Menstrual abnormalities such as amenorrhoea, oligomenorrhea, abnormal irregular per vaginal haemorrhage, and hyperandrogenism are frequently associated with PCOS. The quality of life of women with PCOS is greatly impacted by the constellation of symptoms linked to androgen excess and menstrual disruption. It is necessary to look at new solutions for managing PCOS symptoms in light of the growing burden. Present review summarises the literature on PCOS diagnosis criteria from both Ayurvedic and contemporary perspectives, as well as the many stages of therapy and screening suggestions now employed in its management. Therefore, it becomes crucial to assess this illness in addition to infertility and other associated medical conditions. The Ayurvedic *Panchakarma* treatments with an obvious path to manage PCOS as a medical disease. In this case, *Panchakarma* treatment stimulates the reproductive organs structural potency as well as the body's endocrine and metabolic balance. One of the most successful *Panchakarma* treatments for PCOS is *Basti Chikitsa*. In *Basti Chikitsa* medication, *Kwatha* (decoction) and *Sneha* (medicated oil or ghee) are administered through the anus. When the *Basti* given in small amount and with less precautions termed as *Matra Basti*.

**Keywords:** PCOS, Basti, Matra Basti, Ayurveda

## INTRODUCTION

Among women of reproductive age, PCOS is most likely the health risk that is expanding the quickest. Worldwide, the general population has a 5–10% frequency of this illness. It seems that this familial illness is inherited as a complicated genetic characteristic<sup>1</sup>. Stein & Leventhal were the first to describe the correlation between obesity and amenorrhoea with bilateral polycystic ovaries. It is distinguished by a confluence of polycystic ovaries, persistent anovulation, and hyperandrogenism (clinical or biochemical). Obesity and insulin resistance are commonly linked to this<sup>2</sup>. Because of its great incidence and potential effects on the reproductive system, metabolism, and cardiovascular system, this illness is gaining a lot of attention. In industrialised nations, it is the most frequent cause of anovulatory infertility, hirsutism, and hyperandrogenism<sup>3</sup>. There is debate on the syndrome's clinical characteristics and diagnostic standards as the aetiology is not well established. Modern gynaecologists have the tough and demanding challenge of managing PCOS. The Indian subcontinent is particularly in need of a comprehensive strategy due to its high prevalence (52%)<sup>4</sup>.

### Clinical Features

1. Infertility About 70% of females are infertile because of this condition.
2. Hirsutism and Acne Due to elevated androgen levels.
3. DM type 2 An insulin resistance leads to metabolic dysfunction
4. Irregular menses Hormonal imbalance causes irregularity in menstrual cycle
5. Depression and Anxiety Females suffering from PCOD are seen mentally affected (Helvaci et al). (2017)
6. Discoloration of the skin Neck, area under breast, elbows, groin, and knees are commonly involved.
7. Overweight among all female population of PCOD, on an average 80% of them are confined to weight gain/ Obesity issues.
8. Migraine Fluctuation in hormonal levels can lead to headaches.

In Ayurveda, this specific feminine disease is not explained in detail. Certain characteristics of PCOS are closely linked to Yonivyapada, whereas other characteristics almost seem to be related to Aartvadushti. We are aware that Yonivyapada is the umbrella term for the majority of gynaecological problems<sup>5</sup>. It is one area of research that is thought to offer remedies for the majority of lifestyle diseases is Ayurveda. An in-depth understanding of an illness, from its *Nidana*, *Samprapti*, to *Lakshanas*, and *Chikitsa* is the aim of the Ayurvedic medical approach. This method of treating an illness has completed the science on its own. According to Ayurveda, most Menstrual illnesses including *Asragdara* and gynaecological disorders have been classified under *Yonivyapada*. Therefore, knowledge of *Yonivyapada* and *Aartava Dushti* is crucial for a thorough understanding of menstruation disorders. Eight *Aartava* diseases were described by *Acharya Sushrut*, who also provided a different explanation of *Vandhya-Yonivyapada*, whose primary characteristic is *Nashtartava*<sup>6</sup>.

## AIMS AND OBJECTIVES

- To study etiopathogenesis of polycystic ovarian syndrome and establish its Ayurveda congruence.
- To evaluate symptomatology of PCOS w.s.r.to Ayurveda symptoms.
- To find out possible line of treatment of disease in Ayurveda texts.
- To find out the role of Basti in PCOS

## MATERIALS AND METHODS

- Ayurveda classics, commentaries, modern literature, other recently published books and research journals were thoroughly studied and then an effort was made to understand this syndrome.

### Nidana<sup>7</sup>

1. *Mithyachara*: Faulty dietary habits and abnormal life style both. In PCOS under the heading of abnormal diet we can include pizza, burger, bread, cold drinks, and spicy, oily, junk food consumption. Abnormal life style may be faulty habits of sleep, stress, competition pressure and other *Mansika Bhava* like *Irshya*, *Krodha*, *Dwesha*.
2. *Pradushtartava*: As menstrual blood is a result of cyclic endometrial shedding under the influence of various hormones of HPO axis. In patients with PCOS ovarian compartment is the biggest contributor of androgens. Dysregulation of CYP 17, the androgen forming enzyme in both adrenals and ovaries may be the central pathologic mechanism underlying Hyperandrogenism in PCOS.
3. *Bijadosha*: This is complex multigenic disorder that results from the interaction between multiple genetic and environmental factors. A high prevalence of PCOS or its features among first degree relatives is suggestive of genetic influences<sup>8</sup>.
4. *Daiva*: Unknown or idiopathic causes comes under this heading. Each cause has its own causative process, potential and mode of action.

**Table No 1: Showing Srotas involved in PCOS**

*Srotases* are the transporting channels of *Dhatus* undergoing transformation

<i>Srotas</i> involved	<i>Lakshans</i> in PCOS
<i>Rasavaha Srotas</i>	<i>Akala khalitya</i> (premature hairfall), <i>Gouravam</i> (heaviness), <i>Tandra</i> (stupor), <i>Pandu</i> (anaemia),
<i>Raktha Vaha Srotas</i>	<i>Vyanga</i> (acanthosis nigricans), <i>Youvana</i> , <i>Pidaka</i> (acne), <i>Panduta</i> (anaemia)
<i>Mamsa Vaha Srotas</i>	<i>Adhimamsa</i> (increased body mass)
<i>Medovaha Srotas</i>	<i>Prameha poorvaroopa</i> (may be due to insulin resistance and compensatory hyperinsulinemia), <i>Atisthoulya</i> (obesity) and <i>Granthi</i> (ovarian cysts)
<i>Asthivaha Srotas</i>	<i>Kesha loma dosha</i> (abnormality in hair and body hair can be correlated with hirsutism)
<i>Arthavavaha Srotas</i>	<i>Arthavanasa</i> (defective menstruation), <i>Vandhyatwam</i> (infertility)

**Table No. 2: Showing Signs and Symptoms of PCOS, and its Equivalent *Lakshanas* in Ayurveda with its *Dosha* Predominance**

Signs and symptoms	Equivalent Ayurveda symptom	Dosha involvement
Amenorrhea	<i>Nashtarthava</i>	<i>Vata, Kapha</i>
Oligomenorrhea	<i>Arthavakshya</i> <i>Lohitakshaya</i>	<i>Vata</i> <i>Vata, Pitta</i>
Infertility (anovulatory cycle causing)	<i>Vandhya</i>	
Hirsutism	<i>Lomasha Ganda</i> in <i>Pushpagni</i> <i>Jathaharini</i>	
Anovulatory cycle	<i>Vridha pushpam</i> in <i>Pushpagni</i> <i>jathaharini</i>	
Acne	<i>Mukha Dooshika</i>	<i>Kapha, Vata</i>
Acanthosis nigricans	<i>Karshnyam</i>	<i>Vata</i>
Insulin resistance	<i>Prameha Poorvaroopa</i>	<i>Kaphavrutha vata</i>
Obesity	<i>Sthoulya</i>	<i>Kapha</i>

### Samprapti

*Vata* agitation is the main cause of gynaecological disorders. All movement is caused by *Vata*, and movement is dependent on the *Vata Dosha* for *Kapha* and *Pitta Doshas*. *Shukra*, *Artava*, *Shakrita*, *Mutra*, and *Garbha* are all expelled by *Apana Vayu*. The rise in the body's *Kapha Dosha* inhibits the activity of *Apana Vayu*. *Pitta* is later blocked when *Vata* is blocked. Hormones are unable to carry out their functions since this vitiation prevents them from moving and conducting. *Alpha Dosha* is vitiated by the main etiological elements, such as *Atisnigdha*, *Madhura*, *Abhishyanthi* (junk and high-calorie food) *Ahara*, *Diwaswapna*, *Alpa Vyayama*, etc. that's why *Agni's* function gets hampered at several levels (*Jatharagni*, *Dhatwagni*, and *Bhuthagni*) by the aforementioned *Nidanas*. The body developed *Asamyak Pachitha Ahara Rasa (Ama)* as a result of this *Agnimandya*. *Ama Rasa* and vitiated *Kapha* raise the body's *Snigdhanasha* and induce *Srothorodha*, which hinders *Vata's* ability to operate normally. *Avarana* of *Artava Vaha Srotas*, which results in *Artava Nasha*, is brought on by vitiated *Vata* and *Kapha*.

### Samprapti Ghatak

*Dosha: Kapha- Vata*

*Dushya: Meda Dhatu, Rasa, Rakta*


*Srotus: Artavvashashrotas, Medovahastrotas*

*Srotodusti: Sangha*

*Agni: Manda at Koshtha and Dhatu level.*

## Frame of Samprapti

Agneya property of *Pitta*  Responsible for the functioning of *Arthava*

Snigdhamsa of the body  Affects the *Agneya* property of *Pitta* and hence *Arthava* results in Irregular menstruation & Impaired ovulation

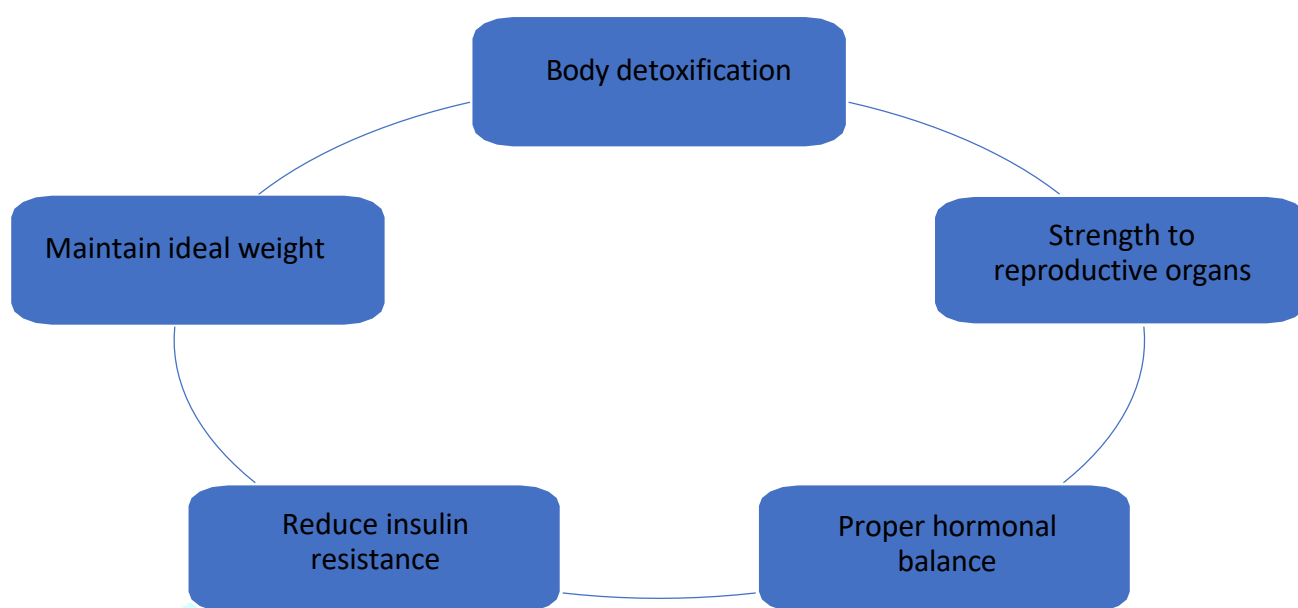
## Management of PCOS

The two primary focusses of to manage the disease are *Samprapti Vighatana* (breaking the pathophysiological process) and *Nidana Parivarjana* (avoiding the etiological causes). There are two methods for doing *Samprati Vighatana*: *Sodhana* and *Shamana*. In *Bahu Dosh Avastha*, or the removal of *Doshas* by *Panchakarma* treatments, *Shodhana* is performed. In *Shamana*, *Aushadha*, are used to calm the elevated *Doshas*. Line of treatment mentioned below<sup>9</sup>:

- *Nidana Parivarjanam Samkshepata Kriyayoga*, Avoiding of the causative factors
- *Vidhivat Upayogya Tatra Sanshodhanam Agneyanam Dravyanam*, Eliminating causes and medication use with *Agneya Gunas*
- Use of medications and treatments that produce *Pitta*

*Sanshodhana* plays a significant role in management of PCOS, *Panchkarma* is the treatment comes under *Sanshodhana*. In the present article the role of *Basti* is described in detail to explore the outcomes of the PCOS management through *Panchkarma* especially with *Basti*.

*Apana Vayu* is the primary *Vata* component involved with PCOS, and according to *Ayurveda*, *Basti* is the most effective *Chikitsa* for this *Apana Vayu* ailment. The ultimate *Sthana* of the *Apana Vayu* is *Aartava Vahini Dhamni*, and the *Moola Sthana* of *Aartavaha Srotas* is *Garbhashya*. Maintaining a healthy menstrual flow is the fundamental objective of *Panchkarma Chikitsa*. *Panchkarma* rejuvenates the system to the original state.

Figure No 1: Showing the multiple role of *Basti* in PCOS

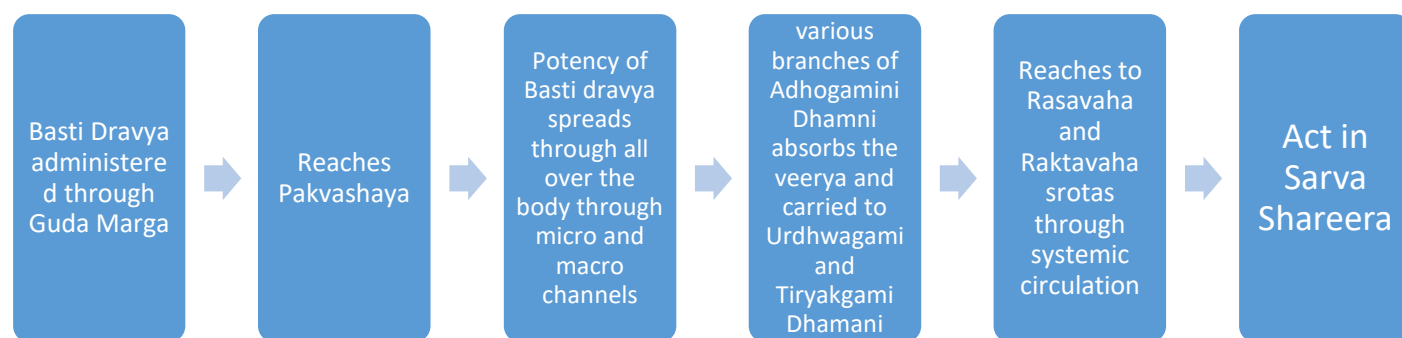
In Ayurveda, there are many varieties of *Basti* which are dependent on the amount of the drug, the quality of substance and the expected action of the *Basti*. According to the drug used, it is classified into two and they are *Niruha* and *Anuvasana*. In *Anuvasana Basti* only *Sneha* (lipid) is used and according to the quantity of *Sneha* given, this is again subdivided as follows<sup>10</sup>:

- *Sneha Basti*: In which the *Sneha* should be administered in  $\frac{1}{4}^{\text{th}}$  quantity of *Niruha Basti* i.e 6 *Pala* (approx. 240 ml)
- *Anuvasana Basti*: In which the *Sneha* should be administered in  $\frac{1}{2}$  the quantity of *Sneha Basti* i.e 3 *Pala* (approx. 120 ml)
- *Matra Basti*: In which the *Sneha* should be administered in  $\frac{1}{4}^{\text{th}}$  quantity of *Anuvasana Basti* i.e 1  $\frac{1}{2}$  *Pala* (approx. 60 ml).

### Probable mode of action of *Basti*

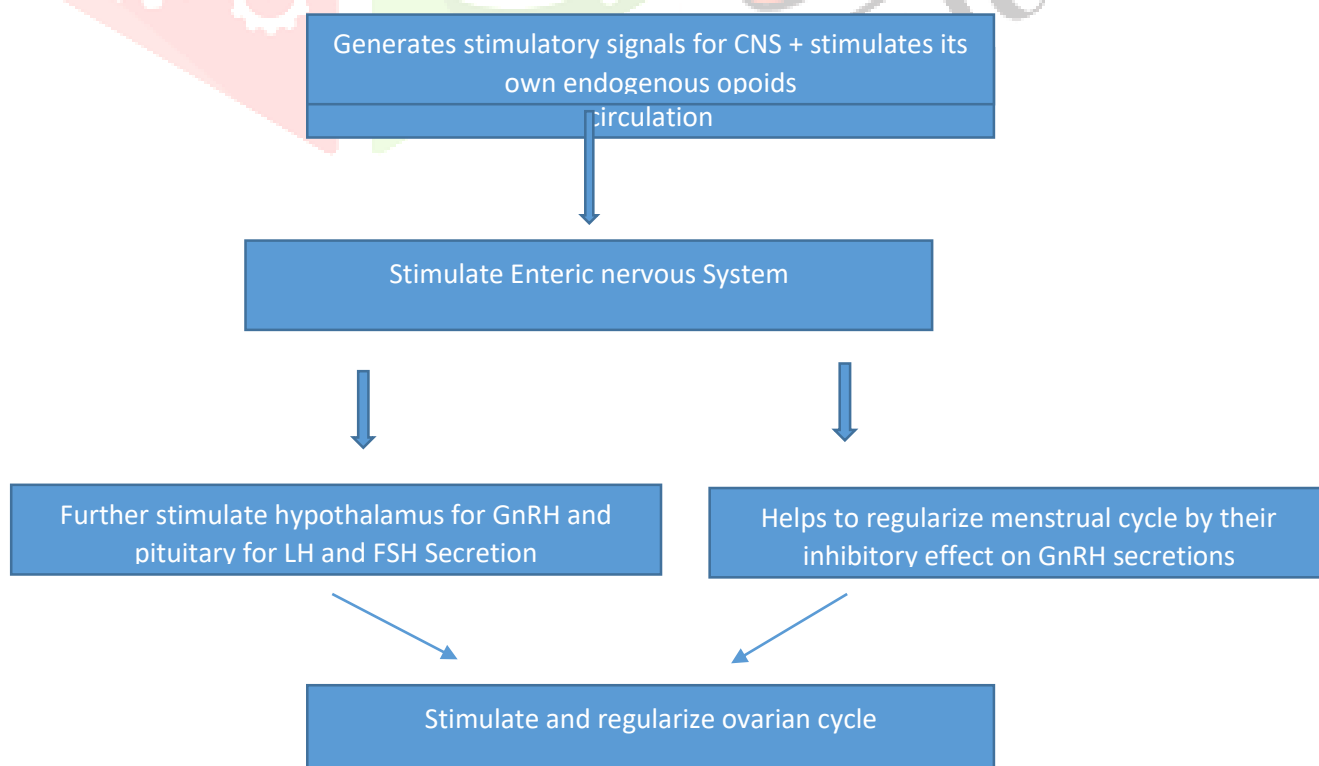
*Basti* given into the *Pakvashaya* (big intestine) draws *Dosha* or *Mala* (metabolic waste) from all over the body, from the foot to the head, due to its *Veerya* (potency) is similar to how the sun in the sky pulls moisture from the soil by its heat. *Anuvasana Basti*, or medicinal oil enema, given in the rectum has notable effects from head to toe just similar as the process when, plants that get root irrigation eventually produce branches with lovely, delicate leaves, blossoms, and fruits and grow to a large size<sup>11</sup>.

Figure No 3. Showing the probable mode of action of Basti



When *Basti* is administered through the rectum, it enters the systemic circulation immediately, resulting in quicker absorption and outcomes. The gastrointestinal tract's microcirculation, exocrine and endocrine secretions, and motility are all regulated by the enteric nervous system. The central nervous system and the enteric nervous system are quite similar. Endogenous opioids are mostly found in the brain (pituitary, hypothalamus) and GIT. The regular menstrual cycle is regulated in part by beta-endorphin. The endogenous opioids that are typically found in GIT are stimulated by the essence of *Basti Dravya*. These Endogenous opioids affect the release of GnRH, which helps to control the hypothalamo-pituitary-ovarian axis and, in turn, the menstrual cycle. With the aid of neurotransmitters, Basti therefore activates the ENS, produces the stimulatory impulses for the central nervous system, and stimulates the pituitary for follicle-stimulating hormone and luteinizing hormone as well as the hypothalamus for GnRH<sup>12</sup>.

Figure No 3. Showing the Physiological action of Basti



### ***Madhutailika Basti* as alternative of *Niruha Basti***

The anti-oxidant and immune-modulatory qualities of *Madhutailika Basti*'s medications may aid in reducing stress, age-related decline, and other factors that contribute to PCOS. According to Ayurveda, the medications used to make *Madhutailika Basti* include qualities like *Vaya Sthapana*, which slows down the ageing process, and *Vrishya*, which is an aphrodisiac. Due to its unique quality of ingredient, such as *Putrprada* (helps in conception), *Viryakari* (which increases the potency of ovum and sperm), *Yoni Shukra Vishodhini* (purifies the reproductive organ in females, sperm and spermatid fluid in males), and *Pushpa Prajakari* (increases progeny), *Shatapushpa*, which was once used as *Kalka Dravya* (paste), is mentioned in a separate *Adhyaya* (chapter) in the *Kashyapa Samhita*<sup>13</sup>.

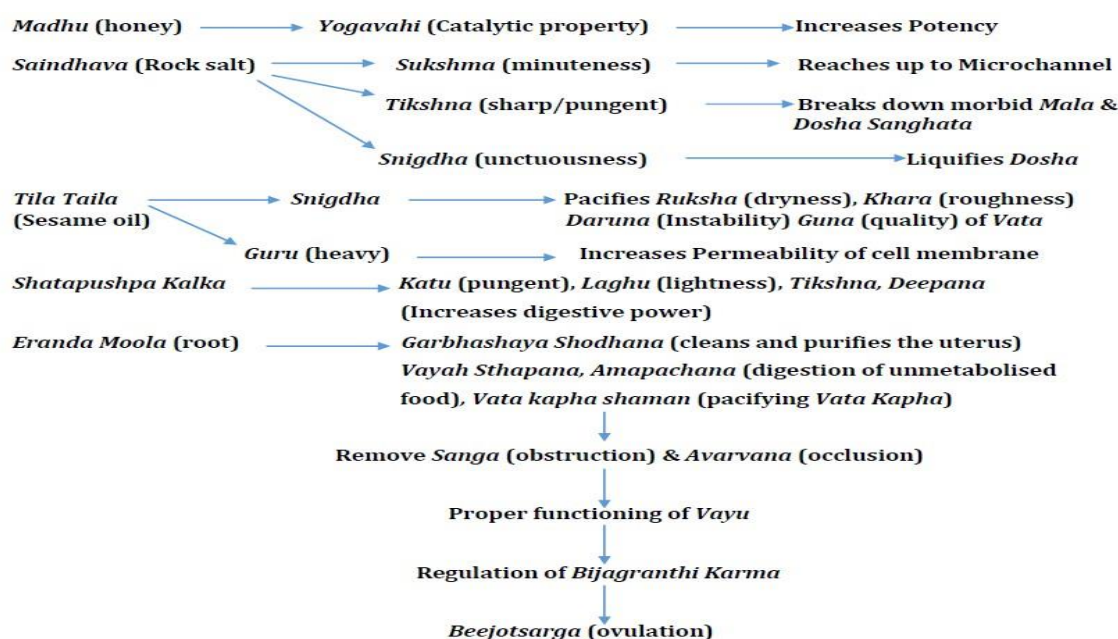


Figure No 4. Showing the Probable mode of action of *Madhutailika Basti*

### **DISCUSSION**

*Artava Kshaya* is covered by *Yonivyapada* and *Artava Dusthi* in Ayurveda, however it is not identified as a separate illness entity. Both are accountable and accountable to one another. The primary pathology underlying *Nashta Artava* is vitiated *Vata*-induced blockage of *Artavaha Srotas*, which results in ovulation and menstrual cessation. Excessive junk food consumption, inconsistent sleep patterns, and lifestyle choices including erratic eating habits and frequent travel can all contribute to this vitiation of *Vata*. This resulted in either *Avarana* (distortion of normal *Vata* function) or *Dhatukshaya* (depletion of tissues) of *Vata* by *Vata* itself or *Kapha* and *Pitta Doshas*. *Snehana*, *Swedana*, and *Basti* are *Yonivyapada*'s line of management. Additionally, it is suggested that in all forms of *Yonivyapada*, *Vata dosha* should be addressed first. The clinical condition known as *Artavakshaya* (oligo-hypomenorrhea) is typified by a protracted intermenstrual period, scanty bleeding (*Artava-Alpata*), and vaginal or menstrual discomfort (*Yonivedana*). This specific ailment is caused by *Vata* and *Kapha*, which result in *Avarana* or *Srotoavarodha*. In Ayurveda, *Basti* is regarded as the most effective therapy for *Vataja* and *Vata Kaphaja* illnesses. *Basti Dravya* promotes *Apana Vayu*'s regular operation, which in turn results in regular menstruation (*Rajas Pravritti*). Any medication administered by the rectal route activates the ENS and produces the sensory signals for the central nervous system, according to contemporary appraisal. *Basti* therefore normalises the menstrual cycle by regulating

the hypothalamo-pituitary-ovarian axis. As a result, *Matra Basti* may help *Artava Kshaya's* menstrual abnormalities and discomfort return to normal.

## CONCLUSION

A complicated endocrine disorder with a high frequency and early to long-term implications is polycystic ovarian syndrome. Following therapy, improvements in bowel habits, digestive processes, ovarian follicle size, hormone normalisation, ET reduction, and menstrual cycle normalisation were seen. These results imply that *Yonivyapada's* course of treatment may be helpful for PCOS patients. In many situations, the line of treatment may be pursued further to determine the efficacy.

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