



Review Article

PUSHPAGHNI JATAHARINI IN MODERN SCIENTIFIC PERSPECTIVE: A REVIEW

Sharma Priya^{1*}, Kaur Inderjeet²

¹M.S. Scholar, Department of Prasuti Tantra Evam Stree Roga, Rishikul Campus, Haridwar, Uttarakhand Ayurved University, Harrawala, Dehradun, India.

²M.D. Scholar, Department of Kaumarbhritya, Rishikul Campus, Haridwar, Uttarakhand Ayurved University, Harrawala, Dehradun, India.

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ABSTRACT

Jataharini has described by *Acharya Kashyapa* in *Revati Kalpaadhyaya* of *Kalpasthan* in *Kashyapa Samhita*. *Jataharini* is a group of disease that affects the women during their different stages of life. It not only affects the women but also their foetuses, neonates and children. *Pushpaghni Jataharini* is one of them which affect the women at their reproductive age. *Adharma* (unrighteousness) is a most important cause for affliction by *Jataharini* as described by *Acharya Kashyapa*. *Adharma* may be said to some extent as lifestyle changes in present time. This lifestyle changes due to modernization has given rise to many lifestyle disorders like diabetes, cardiovascular diseases and polycystic ovarian disease etc. PCOS is one of the most common lifestyle disorders occurring in females. PCOS is emerging as a burning disease affecting a growing number of urban Indian women. A recent rise in PCOS cases in urban India may be due to modernization, stress and lifestyle changes. By analyzing the symptoms of both *Pushpaghni Jataharini* and PCOS, it is found that both are similar to some extent. In ancient time, *Acharya Kashyapa* has considered spiritual power responsible for disease. The causation of disease is not defined on scientific role of *Doshas*. An effort is made in this article to give some scientific reasons why *Pushpaghni Jataharini* is close to the Polycystic Ovarian Syndrome. As India has been labelled as the 'diabetic capital of the world' due to an alarming increase in the number of cases of both diabetes and metabolic syndrome, it is possible that there may be an increasing number of cases of PCOS as well as because PCOS is also a disorder of insulin metabolism. Thus PCOS is a syndrome showing an alarming rise in India and adding economic health burden of the country.

*Address for correspondence

Dr Priya Sharma

M.S. Scholar,
Department of Prasuti Tantra
Evam Stree Roga, Rishikul
Campus, Haridwar, Uttarakhand
Ayurved University, Harrawala,
Dehradun, India.

Email:

dr.priyasharma1aug@gmail.com

Mob: 8868860364

INTRODUCTION

In the concept of *Jataharini*, *Acharya Kashyapa* has explained that *Revati* or *Jataharini* produces various abnormalities in females by affecting them at various stages of their reproductive life.

Angry *Revati* afflicts a menstruating, pregnant, puerperal or *Kutigata* (staying inside a hut) woman during all the three periods (childhood, middle age and old age and also in beginning, mid and end of the day and night).^[1]

Classification

- On the basis of prognosis, *Jataharini* is classified as ^[2]
 - i. *Sadhya* (curable)
 - ii. *Yapya* (difficult to cure)
 - iii. *Asadhya* (incurable)
- On the basis of mode of transmission, it is divided into^[3]
 - i. *Daivi* (divine)
 - ii. *Manushi* (human)
 - iii. *Tiraschina* (animals)

Etiological factors of Jataharini^[4]

There is wide range of etiological factors but some of which has given here-

- 1) Those women are at risk who do not follow religious rites (*Dharma*), jealous to deities and respectable persons and egoistic.
- 2) Those follow bad habits
- 3) Who are fickle minded and all of sudden laugh, weeps, becomes sad or speak lie.
- 4) Who are voracious and give up beneficial talk and diet.
- 5) Over eating, drinking, sleeping and exercise

Specific features of Pushpaghni Jataharini

Description of some of the *Jataharinies* are related with amenorrhoea or menstrual irregularities. Out of these the female with '*Pushpaghni Jataharini*' is having regular cycles but it is fruitless i.e., ovulation does not occurs. She has corpulent and hairy cheeks.^[5] According to *Kashyapa*, it is *Sadhya Jataharini*.

Acharya Kashyapa has quoted that it is only unrighteousness (*Adharma*) which provides an opportunity to *Revati* for affliction of woman.^[6] *Adharma* is referred as everything which is against nature and immoral, unethical, wrong or unlawful. In the current scenario, if we look the people, it seems that they have forgotten their work ethically and are doing against nature.

In Indian lifestyle, principles of *Karma* (action) and *Dharma* (the righteous way to perform the work) are given significant value. Now a days, westernization is a root cause of *Adharma* which is taking place in India continuously. This is not only changing the lifestyle of human beings but also leading to emergence of many lifestyle diseases like diabetes, hypertension, polycystic disease etc. This lifestyle changes includes physical inactivity, over stress, hurried life, excessive intake of junk food etc. women's health is at crisis point due to disturb biological clock in modern era. Women are taking steps on leader of success in corporate world. They do not only perform their household work responsibilities but also do excessive work at workplaces even in unfavourable working conditions. This puts an immense pressure on women due to double responsibility of home and workplace. This in turn lead to stress and health issues because professional women do not exercise, skip meals and consume junk food. Ultimately women suffer from many lifestyle diseases like PCOS which is a burning issue in recent time.

Polycystic Ovarian Syndrome

PCOS is a syndrome showing an alarming rise worldwide. It is a lifestyle disease affecting a

growing number of urban Indian women. The disorder is not new, but it is increasing at a dazzling rate. It is an endocrine disorder with prevalence ranging from 2.2% to 26%. Statistics reveal that, in India, 1 out of every 5 women in the reproductive age is diagnosed with PCOS.^[7]

The polycystic ovarian syndrome (PCOS) is one of the most common endocrine-reproductive-metabolic disorders. It has wide spectrum of phenotypic manifestation like menstrual irregularity in the form of oligomenorrhoea or amenorrhoea, hirsutism, acne, alopecia, obesity and polycystic morphology of ovary on sonography scan. PCOS women may have difficulty in conceiving naturally and therefore, may confront the problem of infertility.

The exact etiology and pathophysiology of PCOS remains still unknown but it is now becoming apparent that the syndrome may have genetic background,^[8] familial occurrence and a multifactorial etiology. The heterogeneity of PCOS may very well reflect multiple pathophysiologic mechanisms and the disorder itself can be initiated at any one of many entry points. Based on current understanding of PCOS, the underlying pathogenetic mechanisms can be categorized as follows:

1. Disruption of the hypothalamic- pituitary-gonadal axis
2. Dysregulation of ovarian steroidogenesis
3. Abnormalities of adrenal steroidogenesis
4. Insulin resistance and hyperinsulinemia
5. Genetic factors

Hyper secretion of LH is one of the typical syndromes of PCOS. Increased secretion of LH both from basally and in response to GnRH is observed in PCOS from hypothalamus and pituitary. The increased LH secretion is expressed by the LH:FSH ratio is positively correlated with the increased free oestradiol. Because the FSH levels are not totally depressed, new follicular growth is continuously stimulated, but not to the point of full maturation and ovulation, in the form of multiple follicular cysts 2-10mm in diameter.^[9] This results in ovulatory dysfunction.

Ovulatory dysfunction is undoubtedly the most common presenting feature in PCOS women which manifests as oligomenorrhoea or amenorrhoea.^[10] Although cycle abnormalities are common during the reproductive years, as many as one-third of women with PCOS may ovulate spontaneously.^[11]

It is known that nearly half of the women with PCOS are either overweight or obese and when

present, obesity worsen the clinical presentation of PCOS. The effect of excess weight gain due to excess adiposity in PCOS women is also being realized. The prevalence of obesity in PCOS (42-74%) is much higher than in the general population (~25%).^[12] Adipose tissue serves multiple functions and is involved in normal metabolism and maintenance of normal endocrine and immune status. Accumulation of excess adiposity that accumulates in obesity causes dysfunction of the adipose tissue compartment, which ultimately leads to immune alteration characterized by chronic low grade inflammation, which causes metabolic derangement and endocrine imbalance in the form of increased insulin resistance and compensatory hyperinsulinemia. This consequently worsens the already existing chronic low grade inflammation and insulin resistance caused due to the PCOS pathology, causing profound hyperinsulinemia in these obese women and magnifies the manifestations of the syndrome. Thus, when obesity, and more so, central obesity gets superimposed on underlying PCOS, overweight and obese women are seen to have more severe symptoms and more severe complications of the syndrome.

Hyperandrogenism is also comorbidity in PCOS. Elevated free circulating levels of bioactive androgen results from three possible mechanisms:

1. An intrinsic functional thecal defect of ovary
2. Insulin resistance resulting in hyperinsulinemia
3. Pituitary LH hypersecretion resulting in excessive thecal stimulation

Hyperinsulinemia causes hyperandrogenemia by promoting excess androgen production from ovarian theca cells, by enhancing pituitary LH secretion and increasing the ovarian androgenic response to LH. Hyperinsulinemia also inhibits hepatic sex hormone binding globulin (SHBG) synthesis, with less androgen now being bound to globulin results in increased bioavailability of free androgen for the target tissues. The resulting hyperandrogenemia is the cause of chronic anovulation, reflected as menstrual irregularity and symptoms of androgen excess viz., Hirsutism, acne and alopecia.

Impact of PCOS on quality of life

The symptoms of polycystic ovarian syndrome such as hirsutism, acne, menstrual disturbances, infertility and obesity are strong factors that can influence the quality of life. These symptoms are associated with undesirable mental health outcomes and impairment in quality of life at emotional, physical and social level. The prevalence

of depression and anxiety in women with PCOS is 29-50% and 57% respectively.^[13] The life time incidence of depressive episodes is 3.8 times higher in women with PCOS. The study by Coffey et al., has shown that women with PCOS have a 20% lower quality of life than patient with asthma, diabetes mellitus, epilepsy and chronic back pain. ^[14] Obesity is the most noticeable factor that lowers the quality of life in PCOS patients while infertility is the second most important factor influencing negatively the quality of life.

Why Pushpaghni Jataharini is close to the PCOS

This typical description of PCOS does not find out as it is in the *Ayurvedic* classics rather symptoms are close to the *Pushpaghni Jataharini* described by *Acharya Kashyapa*. In this *Revati, Vritha Pushpam* (anovulation), *Yathakalam Prapashyati* (i.e. menstruation occurs at regular interval), *Sthula Ganda* (a feature of obesity), *Lomasha Ganda* (i.e., hair present on face; hyperandrogenism) are found.

Anything else cannot be said confirmatively about *Jataharini* and its aspect in recent modern era. But considering etiology and symptomatology, it is not possible to establish congruity with single disease entity. But when, we look into the description of *Jataharini*, some etiological factors are found that can be compared with etiological factors of PCOS in recent era. These factors do not include changes only in daily routine but also includes dietary habit changes and psychological factors. These factors also contribute females to suffer with PCOS. Now it is also considered that genetic factor also predisposes to PCOS. Excessive dietary intake emerges as the major environmental determinants of PCOS. Over nutrition leading to obesity is widely recognized to have an aggravating impact. It is also considered as an etiological factor of *Jataharini* by *Acharya Kashyapa* as *Ghasmara*.^[15]

Improper dietary habit, lifestyle and psychological factors are also considered as the cause of many reproductive disorders by other *Acharyas*.

Acharya Charaka opined that *Mithya Achara* is one of the causes for *Yonivyapada*.^[16] *Acharya Chakrapani* commented that *Mithya Achara* includes *Mithya Ahara* (abnormal or improper dietary habits) and *Mithya Vihara* (improper lifestyle) that is nothing but lifestyle changes.^[17]

Acharya Sushruta^[18], *Charaka*^[19] and *Vagbhata*^[20] have given a protocol for diet and habit during the menstrual cycle (*Rajaswala Paricharya*). If it is not followed during menstruation, it can cause abnormality in

menstruation, female reproductive health and progeny too.

Acharya Charaka has also narrated psychological factor as cause of a fertile women to conceive in late period.^[21] It can be said that specific causative factors to aggravate the particular *Doshas* coupled with non-observance of regulation related to reproductive system are causes for menstrual disorders and many female reproductive diseases. In this way *Mithya Ahara-Vihara* and over mental stress of today's lifestyle affects the *Artavavaha Srotasa* (female reproductive system) and causes female reproductive health disorders.

If compare the features of *Pushpaghni Jataharini* with PCOS, the probable explanation may be as follows:

By analyzing the symptoms *Vritha Pushpam* and *Ythakalam Prapashyati*, it can be said that woman suffering from *Pushpaghni Jataharini* has anovulatory regular menstrual cycle. It is also seen in some patients of PCOS. Enricocarmina has experienced in his study that 15%-21% of hyperandrogenic women with normal menses are anovulatory and have to be considered as affected by PCOS.^[22] In 1963, Goldzieher and colleagues reported that 12% of women with PCOS menstruate normally.^[23]

Now, it is also considered that there is genetic association present with polycystic ovarian syndrome. Familial association of PCOS suggesting a genetic etiology has been clearly established.^[24]

Acharya Kashyapa has not considered *Jataharini* as *Beejadoshat Vyadhi* but considered some divine power responsible for diseases and described all those conditions under the heading *Jataharini*. It may be just possible whenever the scientist of that era failed in establishing role of *Doshas* in causation of disease then they considered spiritual power responsible for disease.

There are some references that may prove, *Pushpaghni Jataharini* in that era may also involve genetic factor. The following references are-

- 1) *Sthula Ganda* (corpulent cheeks) as described by *Acharya Kashyapa* may be considered as a feature of *Sthaulya* (obesity). During description of etiology factors of *Atisthaukata* (one of *Asthaninditiya Purusha*), *Acharya Charaka* has defined "*Beeja Swabhava*" as one of the causative factors.^[25]
- 2) As *Acharya Madhava* has mentioned in *Medoroganidanam Adhyaya* that *Medodushti* does not occur without *Prameha* and this *Medodushti* leads to *Sthaulya*.^[26] He has

described *Medoroga* just immediately after *Prameha*.

Thus, *Ayurveda* also considers obesity and diabetes are related to each other. *Acharya Sushruta* and *Charaka* both have considered *Prameha* as *Sahaj*^[27] and *Beejadoshat Vyadhi*^[28] respectively. Thus in Ayurvedic classics *Prameha* (diabetes) is also occur due to involvement of *Beeja*.

In this way *Ayurveda* also accepted a relation between obesity and diabetes. This obesity is found in *Pushpaghni Jataharini* in the form of *Sthula Ganda* but diabetes is not defined as feature of *Pushpaghni Jataharini*. Diabetes is a long term sequel of polycystic ovarian disease, so it may possible that *Acharya* in that era might be failed to find the diabetes in *Pushpaghni Jataharini*.

Another feature of *Pushpaghni Jataharini* is *Lomasha Ganda* i.e., hairy cheeks which are also found in PCOS as hyperandrogenism in the form of hirsutism, acne and alopecia.

CONCLUSION

Today's change in lifestyle is a major causative factor for many lifestyle diseases in which PCOS is most common occurring problem in women. This lifestyle change is considered as *Adharma* in ancient time due to which many diseases had emerged in that time also. *Pushpaghni Jataharini* was one of them which affected the women only. By analyzing the symptoms of both the diseases seem same to some extent.

We are at the middle of the alarming PCOS, which is a heterogeneous complex disease. It significantly reduces the quality of life. Poor self-esteem in PCOS women has been linked to higher levels of depression and anxiety.

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