



Review Article

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DIAGNOSIS OF PCOS WITH AYURVEDIC NIDANA PANCHAKA: A REVIEW

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ABSTRACT

PCOS is one of the common endocrine diseases in reproductive age group of females and it is the main cause of anovulatory infertility. It shows symptoms like irregular menses, hirsutism, acne, acanthosis nigricans, obesity, infertility, insulin resistance, hair loss, hyperandrogenism and having high risk to develop endometrial hyperplasia, diabetes mellitus and cardiovascular diseases. PCOS is not only ovarian dysfunction but it is actually an endocrine and metabolic disorder. There is change in lifestyle, fast food consumption habit, lack of exercise and continuous stressful work which leads to PCOS problem in the society. In Ayurveda every disease is diagnosed by nidana Panchaka. Though signs and symptoms of PCOS are not given directly in Ayurvedic literature but there is 8-10 diseases given in Ayurveda which can correlate with PCOS. In modern science there are very few drugs which controls PCOS and majority of them are hormonal drugs which having lots of side effects that's why many Doctors and researchers are looking for natural drugs rather than hormonal treatment. So there is lot of opportunity to treat PCOS by Ayurvedic drugs. But for that Ayurvedic diagnosis of PCOS is very important.

Keywords: PCOS, Hormonal imbalance, Srotorodha, Aama, Nidana Panchaka, Yonivyapada.

INTRODUCTION

Polycystic Ovarian Syndrome (PCOS) is one of the fast growing endocrine and metabolic disease in this era. Main factors which are responsible for PCOS are insulin resistance and hyperandrogenism which causes irregular menses, obesity, hirsutism, acanthosis nigricans, acne along with enlarged ovaries with multiple cyst and anovulation due to thickened tunica. PCOS is one of the most common endocrine diseases in Indian females with prevalence of 9.13%.¹

Today's changing lifestyle, fast food and junk food consumption habits, excessive stress and anxiety, lack of exercise are the main reasons which worsens the problem of PCOS in society.

In Ayurvedic literature there is no any specific disease mentioned which can directly be correlated with PCOS. Although there are some diseases given in Ayurveda which can be compared with PCOS but for the management purpose Ayurvedic diagnosis of PCOS by Nidana Panchaka should be mandatory through which we can treat this condition.

In Ayurvedic literature definition of disease is described as "Dosh Dushya sammurchhana janito vyadhi".² That's why for the diagnosis of any disease by Ayurvedic way Nidana Panchaka and Dosha Dushya sammurchhana are very important.

Etiopathogenesis

1. Insulin resistance
2. Ovarian volume increase $\geq 10 \text{ cm}^3$
3. Multiple (>12) follicular cyst of 2 to 9 mm size

4. Hormonal imbalance :

- a. Increase LH (Luteinizing Hormone)
- b. LH: FSH ratio is > 2:1
- c. Increase androgen
- d. Increase estrogen
- e. Decrease Sex Hormone Binding Globulin (SHBG)
- f. Increase Anti Mullerian Hormone (AMH)³

Signs and Symptoms

1. Amenorrhea or irregular menses
2. Hirsutism i. e. excessive facial hair growth
3. Obesity
4. Acanthosis Nigricans i. e. Thickening and dark pigmentation of skin especially on neck, thighs, axilla and groin.
5. Acne
6. Infertility⁴

Complications

1. Diabetes Mellitus
2. Endometrial Carcinoma
3. Hypertension and Cardiovascular diseases
4. Sleep Apnea⁵

Differential diagnosis

Some endocrine diseases resembles symptoms like PCOS

1. Cushing syndrome
2. Congenital Adrenal Hyperplasia
3. Tumor of Adrenal gland
4. Tumor of Ovary

Ayurvedic perspective of PCOS

For diagnosis of PCOS by Ayurvedic point of view we just have to see

- 1) Diseases which can correlate with PCOS
- 2) Dosha and Dushya which are involved in PCOS
- 3) Srotas involved in PCOS
- 4) Nidana Panchaka of PCOS

Diseases which can correlate with PCOS

Vandhya Yonivyapada

According to Sushruta, Vandhya Yonivyapada is a condition in which there is Nashtartava i.e. both amenorrhea and anovulation. It is mainly due to vata and kapha obstructing the artavavaha Srotas. According to Chakrapani, Vandhya is considered to be because of bijamsh dushti i.e. congenital anomaly.

In Vandhya Yonivyapada there is menstrual and ovulatory aspects of disease are given but other sign and symptoms are not given. So this can be taken as only symptom of disease and not as a whole disease⁶.

Arajaska Yonivyapada

According to Charaka, Pitta is located in vaginal tract and uterus vitiates the blood which results in amenorrhea with discoloration of skin and extreme emaciation.⁷

Lohitkshaya Yonivyapada

In this condition due to vitiation of Vata and Pitta dosha there is a Rajaksheenata i.e. scanty menses along with burning sensation, emaciation and discoloration.⁸

Rajaksheenata may be present in the form of scanty menses, irregular menses or secondary amenorrhea.¹³

Artava kshaya

Artava kshaya is a condition in which menstruation does not appear in its regular period. According to Sushruta, there are three symptoms of Artava kshaya

- A. Yathochit kala adarshanam i.e. irregular menses
- B. Alpata i.e. scanty menses
- C. Yoni vedana i.e. dysmenorrhea

So it can be considered as symptom of PCOS.⁹

Anartava

Anartava is literally means amenorrhea.

According to Ashtanga Sangraha, aggravated vata and kapha dosha obstruct orifices of channels carrying Artava i.e. Artavavaha Srotas which results in absence of menstruation. Here also says that it's not a "Sarvatha kshaya" of Artava but decrease in Artava.

Amenorrhea in PCOS is the secondary amenorrhea which may revert back or occasionally menstruation is regained back with medication or by reducing the predisposing factors. This fills in exactly to the criteria of Na Tu Sarvatha Kshaya Eti i.e. not the complete absence. Hence, Anartava can be

considered as the symptom of the disease and not merely the disease as such.¹⁰

Nashtartava

Nashtartava consists of two words Nashta indicates destruction and Artava indicates menstrual blood or ovum. Nashtartava can be considered in terms of both amenorrhea and anovulation in which vitiated vata and kapha doshas obstruct the Artavavaha srotas, thus menstrual blood or ovum is not discharged.

In Nashtartava, due consideration has been given to the menstrual and ovulatory aspects. Hence, this can be taken as the symptom of the disease and not PCOS as a whole.¹¹

Pushpaghni Jataharini

Pushpaghni Jataharini explained by Kashyap and having typical clinical features of PCOS like

A. Vrutha Pushpa: Refers to anovulatory cycle.

B. Sthoola: Refers to obesity.

C. Lomash Ganda: Refers to hirsutism.

Hence Pushpaghni Jataharini clarifies both hormonal imbalance and metabolic disturbance.¹²

Granthi

Granthi is considered as round swelling or enlargement in any part of the body. It has been taken in due consideration basically because of the appearance of the cysts in the ovaries, which increase the volume of the ovary and gives it a swollen appearance. Due to tridosha prakopaka aahara vihara, morbid doshas vitiates the mamsa, asruk and medo dhatu with predominance of kapha dosha causes granthi.

Multiple cysts, with a typical appearance of a string of pearls or pearl necklace is a hallmark of PCOS. These cysts are fluid-filled sacs in the ovary, which increase the volume of the ovary giving it a swollen appearance equating these with granthi.¹³

Sthoulya (obesity)

Faulty diet and activity leads to the agnimandya (reduced digestion) which leads to the aama utpatti. It vitiates the rasa dhatu which lead to dhatwagnimandya (reduced metabolism) and Srotorodha (obstruction in body channels) which further leads to "Srotorodha janya apachit medo dhatu vridhhi" (obstruction in body channel causes increase in the medo dhatu) leading to sthoulya (obesity)

Though sthoulya seems to fit among the parameters of PCOS, there are certain points which are very specific to PCOS. As PCOS is seen to manifest even without the features of sthoulya in many. And also sthoulya itself can't explain all the pathologies seen in PCOS like the cystic manifestation, hirsutism etc.¹⁴

Santarpanotha Vyadhi

Due to high caloric diet and faulty activities like over sleeping, lack of exercise leads to increase in Kapha dosha and Medo dhatu which may lead to the disease process which manifests as santarpanotha vikaras. Many of the symptoms of santarpanotha vikaras can be equated with PCOS as Prameha (insulin resistance), Youvana pidaka (acne),

Klaibya (infertility), Atisthoulya (obesity) etc. All these symptoms finds place in the long list of symptoms of PCOS.

Analyzing the causes of PCOS, obesity and insulin resistance are considered as the main causes in developing PCOS. Scrutinizing the nidanas in terms of PCOS, sedentary life style adds to the impaired metabolism, also less energy consumption in the form of glucose, hence more of it is converted to fat leading to obesity.¹⁵

Dosha involved in PCOS

Role of tridoshas in Ovulation and Menstruation

All the three doshas play an important and distinctive role in processes like ovulation and menstruation.

Role of Vata: Vata is responsible for the movement of follicles, rupture of follicles and release of ovum and its movement towards fimbriae. These actions are due to Apana vayu, the force behind downward movement which is responsible for the movement of menstrual blood.

Role of Pitta: Pitta is responsible for the action of hormones and its interplay with the female reproductive system.

Role of Kapha: Kapha is responsible for the nourishment and development of the tissues that form and support the reproductive system including the growth of the follicles during the ovarian cycle.

Dosha dushti (Vitiation of Doshas) in PCOS

Apana vata

Apana vata is responsible for evacuation of Artava. Due to apan vata dushti evacuation of artava obstruct which leads to anartava i.e. anovulation or alpartava i.e. Oligo ovulation.

Vyana vata

Vyana vata is responsible for blood circulation, maturation and rupture of graffian follicle. Due to vyana dushti proper maturation of follicles does not occur leading to polycystic ovaries.

Samana vata

Samana vata is responsible for digestion of food. Due to samana vata dushti proper digestion of food does not occur which leads to aama formation and srotorodha.

Pachaka pitta

Due to pachaka pitta dushti proper digestion of food does not occur which leads to aama formation and srotorodha.

Bhrajaka pitta

Bhrajaka pitta located at skin level and its vitiation in PCOS responsible for acanthosis nigricans and acne.

Kledaka kapha

Kledaka kapha is also necessary for digestion of food and its vitiation ultimately responsible for aama formation.

Srotas involved in PCOS

According to Ayurveda in every disease there is khavaigunya or srotodusti (vitiation of body channels). As per signs and symptoms of PCOS we can manipulate different srotodushti¹⁶ and their symptoms in PCOS as follows

Rasavaha srotodusti lakshanas

Due to mithya aahara vihara (faulty diet and activities) there is agnimandya (reduced digestion) leading to rasavaha srotodusti leading to improper formation of rasa dhatu in turn affects upadhatu artava as well as uttarottara dhatu. Atichinta i.e., stress has a prime role in causing PCOS. The adrenal glands produced Cortisol hormone which in excess can cause resistance in adrenal receptors and contribute to Insulin Resistance. Stress raises Noradrenalin levels which, in turn, can induce Insulin Resistance as well. Stress is also associated with decreased insulin sensitivity. As glucose level rises in the body in response to stress, they stimulate increased insulin production. Further, glucocorticoids are also stress-response chemicals and these hormones are also responsible for increased storage of abdominal fat and raising blood glucose levels. The symptoms like Srotasam lepa (obstruction in the srotas), Saada (depression), Akala khalithya (hair fall) have relevance with the symptoms of PCOS.

Raktavaha srotodusti lakshanas

It includes only a part of the manifestation that is in the latter half of the disease. The symptoms like Neelika (Acanthosis Nigricans) and Youvana Pidaka (Acne) have relevance with the symptoms of PCOS.

Mamsavaha srotodusti lakshanas

The symptoms like Granthi i.e., appearance of cyst on ultrasonography is one among the main manifestations of PCOS.

Medovaha srotodusti lakshanas

It includes only a part of the manifestation that is in the latter half of the disease. The symptoms like Pramehanam poorvaroopo i.e., premonitory signs and symptoms of Prameha, Granthi (cyst) and Atisthoulya (obesity) have relevance with the symptoms of PCOS.

Asthivaha sroto dusti lakshanas

It includes only a part of the manifestation that is in the latter half of the disease. The symptoms like Kesha loma smashru dosha (abnormality in hair, body hair, beard and moustache) indicates that it can be compared to Hirsutism in PCOS.

Nidana panchaka of PCOS

Nidana (etiological factors)

- A. Mithya aahara (faulty diet) :
- Fast food
 - Junk food
 - Bakery product
 - High caloric diet
 - Oily and spicy food
 - Irregular timing of eating
- B. Mithya vihara (faulty habits):
- Divaswapna (sleepiness of the day bedtime)

- b. Ratrijagaran (watch night)
- c. Atichinta (over stress and anxiety)
- d. Avyayam (lack of exercise)
- C. Artavadusti i.e. hormonal imbalance
- D. Bijadosha i.e. hereditary factors
- E. Daiva i.e. idiopathic causes.

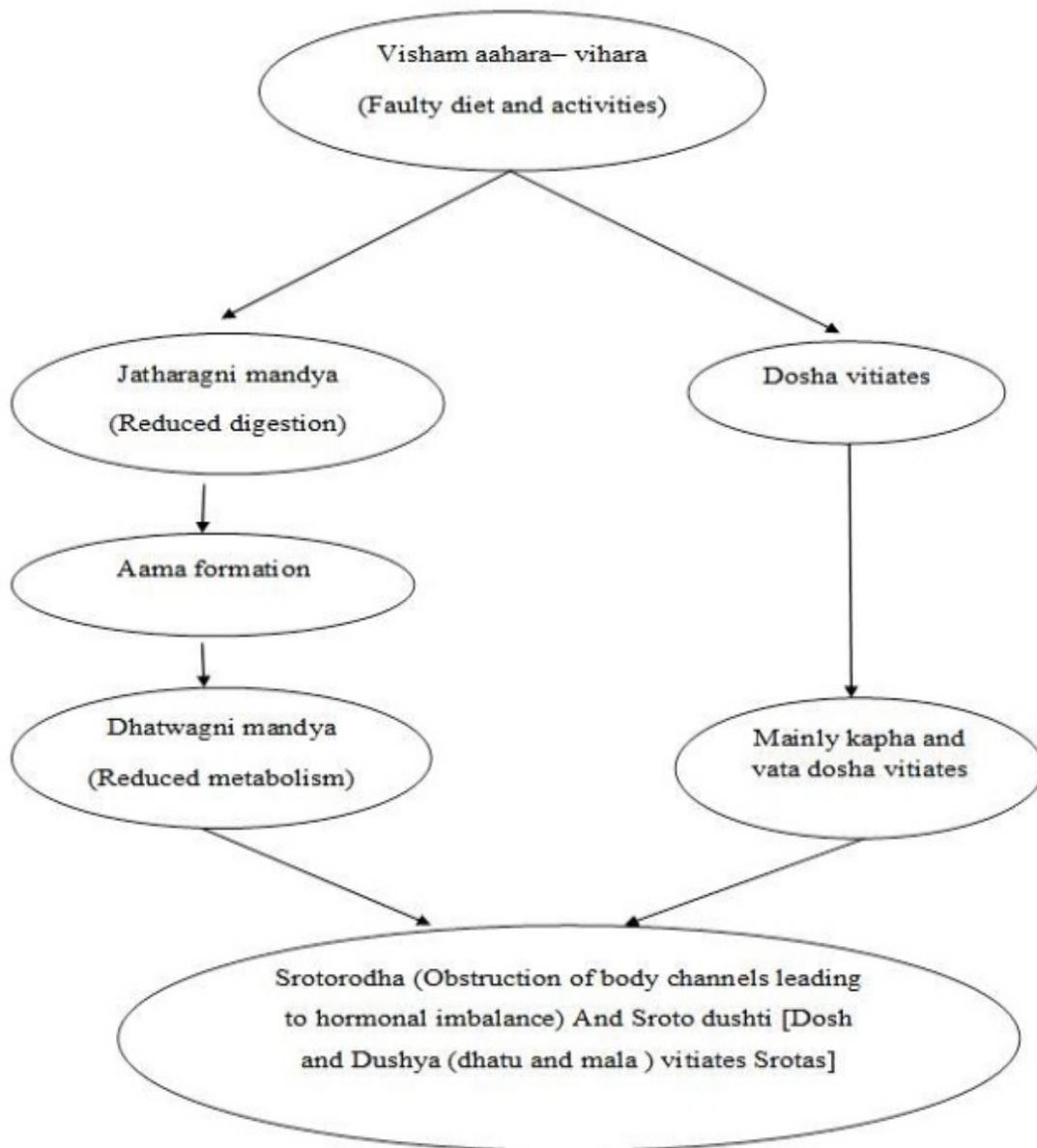
Samprapti (etiopathogenesis)

In PCOS Samprapti ghataka (etiopathological components) can be considered as follows

Samprapti Ghataka

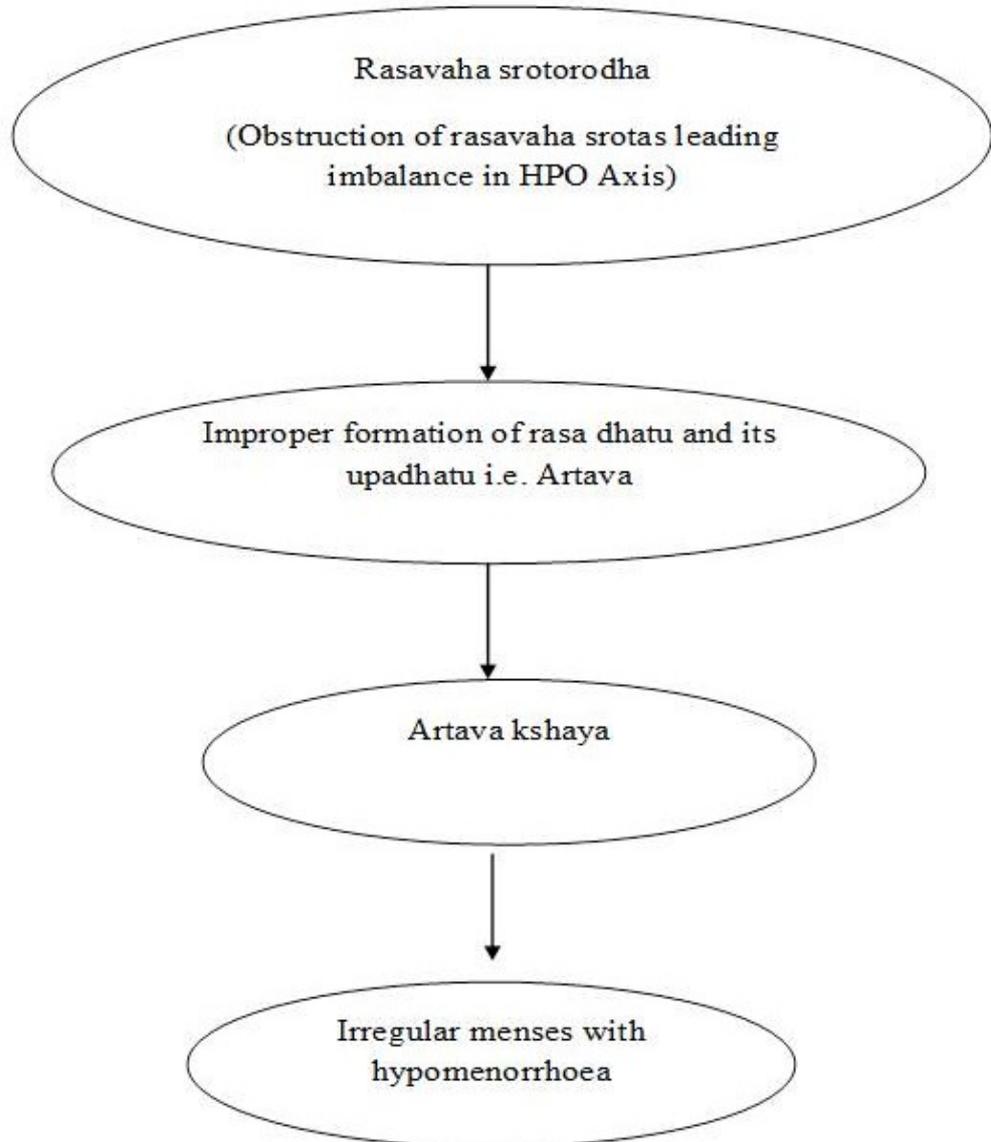
- **Dosha:** Kapha, Vata
- **Dushya:** Rasa, Rakta, Mamsa, Meda, Asthi
- **Agnimandya**
- **Aamotpatti**
- **Srotodusti:** Rasavaha, Raktavaha, Mamsavaha, Medovaha, Asthivaha, Artavavaha
- **Rogamarga:** Abhyantara
- **Adhishtana:** Garbhashaya, Phalakosha
- **Vyaktasthana:** Sarvashareera
- **Udbhavasthana:** Amapakvashaya / Koshta
- **Dushti prakara:** Sanga and Granthi
- **Agni:** Jatharagni and Dhatwagni
- **Sadhyasadhya:** Kashtasadhya

Samprapti pathogenesis of PCOS

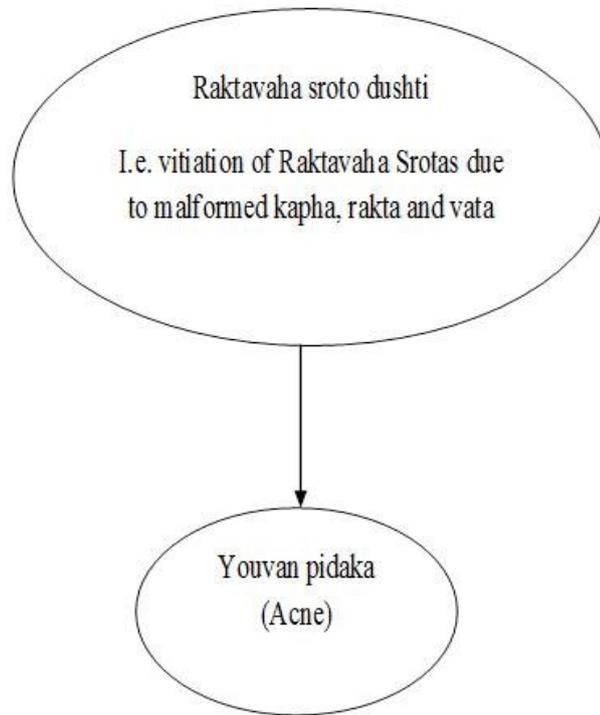


Pathogenesis occurs in different srotas are as follows

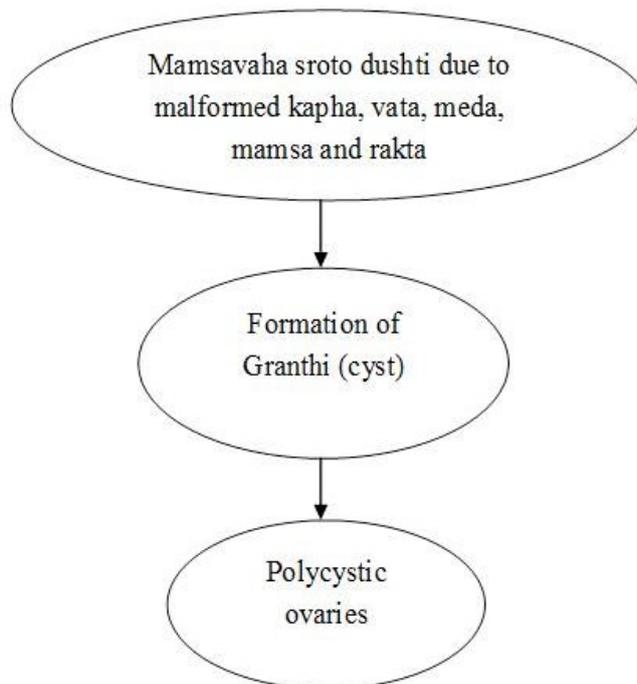
1. Rasavaha Srotas:



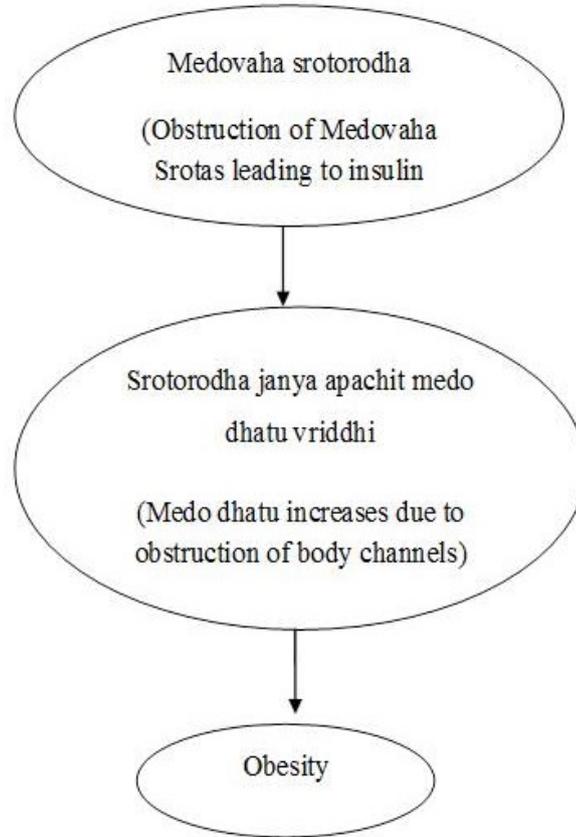
2. Raktavaha Srotas:



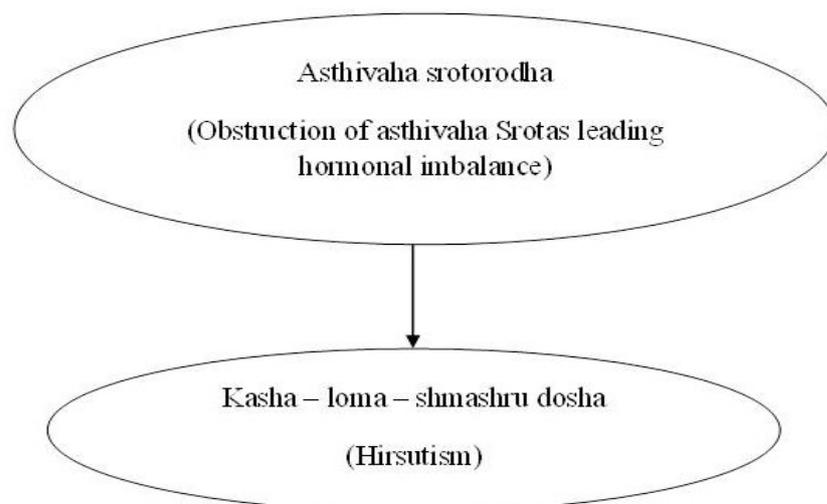
3. Mamsavaha Srotas:



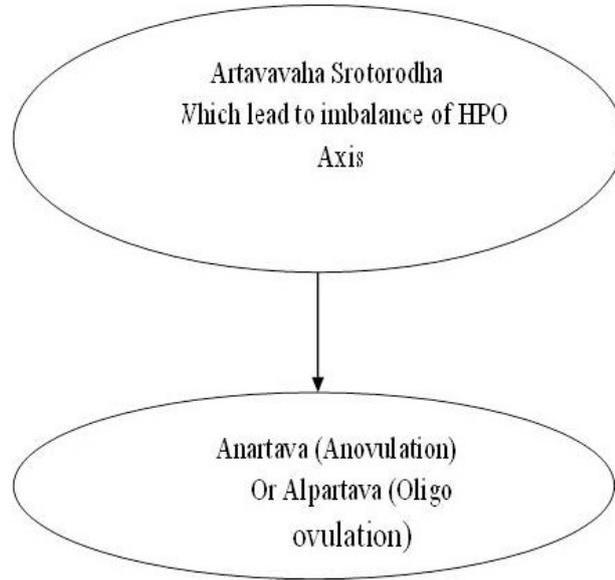
4. Medovaha Srotas:



5. Asthivaha Srotas:



6. Artavavaha Srotas:



Poorvaroopa

The term Poorvaroopa refers to a stage when the mild symptoms of the disease manifest, that is the initial stage before a full blown manifestation. This definition holds very well for the term PCOD where the disease manifests in milder form and hence the term polycystic ovarian disease, which when takes a full blown picture with all metabolic, endocrinal manifestation it is considered as polycystic ovarian syndrome.

Hence in PCOS following poorvaroopa can be consider

- Slight menstrual irregularities
- Abnormal weight gain
- Mild acne
- Mild appearance of cystic ovaries

Lakshana (sign and symptoms)

- Artava kshaya i. e. irregular menses with hypomenorrhoea
- Anartava (amenorrhea or anovulation)
- Bijashaya granthi (polycystic ovaries)
- Hirsutism
- Sthoulya (obesity)
- Youvana pidaka (Acne)

Upadrava (complications)

- Prameha (Diabetes Mellitus)
- Hridroga (Cardiovascular Diseases)
- Vandhyatva (Infertility)
- Medoroga (Obesity)

CONCLUSION

PCOS causes mainly due to lifestyle changes. It is actually endocrine and metabolic disorder which is the main cause of female infertility. In Ayurvedic line of treatment destruction of dosha dushya sammurchhana is very important to treat the disease.

For this purpose the Dosha, Dushya, Srotas and Nidana Panchaka of PCOS is very important. In Ayurvedic literature there are two types of treatment given one is Dosha pratyhanika (treatment of doshas) and other is vyadhi pratyhanika (treatment of symptoms). These treatments can be applied only after proper understanding of PCOS by Ayurvedic point of view.

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