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## Critical Review of effect of Ayurvedic Diet and Herbal medicines as Dhatvagni Dipan in the management of PCOS.

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### ABSTRACT

Polycystic ovarion syndrome (PCOS) is becoming a major and serious cause for female infertility now a days. According to Ayurveda it can be correlated with Artavdushti Vikara. Artava is said Updhatu of Ras Dhatu formed in Rasvaha Srotasa due to the action of Ras Dhatvagni on Ahar rasa. Balanced state of Ras Dhatvagni is responsible for the formation of Shuddha Aartav in the body. hence vitiation of Ras Dhatvagni plays major role in the etiopathogenesis of PCOS. Faulty food habits and sedentary lifestyle cause diminution of Digestive fire (Agni) especially diminution of Ras Dhatvagni resulting the formation of excess of Ama Rasa without nourishing further Raktadi Dhatu and Aartavadi Updhatu also. So to treat the PCOS as Aartav Dushti Vikara, provision of certain Pathyakara Ahara and herbal medicines which have opposite qualities (Gunas) of Ama Rasa causing Ras Dhatvagni Dipan should be done. In the present study review of various Ayurvedic medicinal plants like Vatsak, Patol, Kutki, Sariva, Nimba, Triphala, Mrudvika, Mustha, Guduchi, Vishva, Chandan ect. and Pathyakara Ahara is taken which together can cause Dipan of Ras Dhatvagni as a result of this ultimately capable to prove effective in Artav Dushti i.e. PCOS.

**KEYWORDS:** PCOS, Dhatvagni Mandya, Pathyakara Ahara, Ayurvedic medicinal Herbs.

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## Introduction

Ayurveda is the ancient, holistic science of life which heals and treats the human body on the basis of natural, eternal phenomenon. To achieve its main objective i.e. “to maintain health of the healthy persons and to cure the diseases of diseased persons.” [1] It mainly focuses to follow daily routine life style (*Dincharya*)[2] seasonal life style (*Rutucharya*),[3] Rules and regulations to take diet (*Ashta Aharvidhi Vishesh Ayatanas, Ahar Vidhi Vidhanas*),[4] *Pathya–Apathya* management in each disease and simple herbal medicinal preparations to cure disease ect. These are the some important aspects for what whole world is approaching towards Ayurveda. At present era, sedentary working nature, lack of exercise, day dreams and faulty food habits without following rules and regulations of *Ahara* become the vulnerable causes for the developing the various metabolic disorders like obesity, type 2 diabetes mellitus, hypothyroidism, hypertension ect.. Among these PCOS (polycystic ovarian syndrome) is one of the increasing metabolic, life style disorders now a days. Globally prevalence of PCOS is estimated to be between 5.5% - 12.6% where as relatively high prevalence in India estimates between 8.2% - 22.5% [5] therefore multiple, different line of treatments and life style management for PCOS should be evaluated and developed. In the Ayurveda, PCOS can be correlated with various *Aartav Dusti Vikara*. *Artava* is said *Updhatu* of *Ras dhatu*[6] formed in *Rasvaha Srotasa* due to the action of *Ras Dhatvagni* on *Ahar Rasa*. [7] Balanced state of *Ras Dhatvagni* is responsible for the formation of *Shuddha Aartav* in the body. hence vitiation of *Ras Dhatvagni* plays major role in the etiopathogenesis

of PCOS. As etiopathogenesis of all metabolic disorders (*Santarpanjanya Vyadhi*) is more or less similar, the sedentary lifestyle and faulty food habits cause diminution of Digestive fire (*Agni*) especially diminution of *Ras Dhatvagni*, resulting in the formation of excess of *Ama Rasa* without nourishing further *Raktadi Dhatu* and *Aartavadi Updhatu* also.[8] So to treat PCOS, provision of certain *Pathyakara Ahara* and herbal medicines which have opposite qualities (*Gunas*) of *Ama Rasa* causing *Ras Dhatvagni Dipan* should be done. In the present study review of various Ayurvedic medicinal plants like *Vatsak, Patol, Kutki, Sariva, Nimba, Triphala, Mrudvika, Mustha, Guduchi, Vishva, Chandan ect.* and *Pathyakara Ahara* is done which together can cause *Dipan* of *Ras Dhatvagni* as a result of this ultimately capable to prove effective in PCOS.

**Aim:** To study the critical review of effect of Ayurvedic Diet and Herbal medicines as *Dhatvagni Dipan* in the management of PCOS.

### Objectives:

1. To study the review of Modern concept of PCOS.
2. To study the review of *Pathyakara Ahara*.
3. To study the review of different herbal medicines like *Vatsak, Patol, Kutki, Sariva, Nimba, Triphala, Mrudvika, Mustha, Guduchi, Vishva, Chandan ect.*

### Materials and Methods:

- A literature review will be taken from :
1. Ayurvedic classics : From *Charak Samhita. Sushrut Samhita., Ashtang hriday., Bhaishajya ratnavali., Bhavprakash., Sharangdhar Samhita.*
  2. Modern Science : Text books of internal medicines.

3. By internet : Information of research database from various search engines.

4. By different journals

### Review of literature:

#### Review of PCOD:

In Ayurveda, gynecological diseases are described under *Yonivyavada*, types of *Aartav Dushti Vikara*, *Rakta Pradar*, *Aartav Kshya* and *Vruddhi* ect. The signs and symptoms of PCOS can be correlated with few *Yonivyavada Vikara*<sup>[9]</sup> like *Vandhya*, *Arajaska*, *Vatal Yoni*, *Vataj* or *Vat-Kaphaj Aartav Dushti*,<sup>[10]</sup> *Nashtartav* <sup>[11]</sup>ect.

- In *Nashtartav*, menstrual flow is obstructed by vitiated Vata and Kapha
- In *Vandhya Yoni* where menstrual flow is normal but anovulatory cycle may present.
- In *Avarana* pathology where *Aartav pravrutti* becomes irregular due to *Avarodh* by *Vat* and *Kapha* as like hormone imbalance.

**Etiology:** Specific etiology is not described in Ayurveda classics but as mentioned above, etiopathogenesis of all the metabolic disorders is more or less similar. So *Mithyachara* like *Adhyashana*, *Viruddhashan*, *Kaphakar Ahar Sevan*, *Avyayam*, *Divaswapna*<sup>[12]</sup> ect. can be taken as principal causative factors to alter hypothalamo - pituitary axis causing PCOS like changes. *Bijdosha*, *Pradushtaartav*, *Daiva* <sup>[13]</sup> are also the causative factors for PCOS.

**Etiopathogenesis:** The sedentary lifestyle and faulty food habits cause diminution of Digestive fire (*Agni*) especially diminution of *Ras Dhatvagni*, results in the formation of excessive sweet, *Ama Rasa* which blocks every *Srotasa* and forms only very unctuous, vitiated *Meda*. Due to the obstruction to the channels,

nutrition of further *Raktadi Dhatu* and *Aartavadi Updhatu* does not takes place.<sup>[14]</sup> Excess increase of *Meda* finally turns into obesity, disturbed metabolism, hormone imbalance, hyperinsulinemia, hyperandrogenism thus developing amenorrhea, anovulation, hirsutism etc.

#### Clinical features of PCOD:

- Amenorrhoea or oligomenorrhoea.
- Increased ovarian volume >10cc.
- Hirsutism.
- Abnormal hair growth.
- Acne or skin manifestation.
- Pelvic pain.

#### Management:

Management of PCOD is symptomatic. According to symptoms like menstrual disturbances, symptoms of hyperandrogenism and infertility modern allopathic management include:

- Oral contraceptive pills for menstrual irregularities.
- Anti – androgens and other ovulation induction related drugs in infertility.
- Ovarian drilling in infertility.
- Uses of mood elevators to pacify stress and anxiety.
- Certain hypoglycemic drugs for insulin resistance.

Ayurvedic management considers following aspects:

1. *Nidanparivarjanam*: In the management, *Nidanparivarjana* is the primary management suggested by *Sushruta*. Therefore *Apathyakara Ahara* and *Vihara* should be avoided and *Pathyakara Ahara* should be suggested.
2. *Karshan Chikitsa*: Charaka suggested *Karshan Chikitsa*<sup>[15]</sup>

in *Santarpanjanya Vyadhi* (metabolic disorders). It can be done by *Shodhan (Panchakarma)* and *Shaman* (medicinal) treatment also.

3. *Dhatvagnidipan* : Many herbal drugs are mentioned in the Ayurveda classics to relieve *Agnimandya* especially *Dhatvagnimandya* due to that *Avarodha* at *Aartva Vaha Srotas* gets relieved and proper nutrition of *Aartva* takes place.

4. *Aagneyadravya* and *Swayonivardhana*<sup>[16]</sup> : *Aartva* is *Aagneya* in nature so medicines having *Laghu, Ushna, Tikshna* properties and *ushna virya* resulting *Vat* and *Kapha Shaman* should be used.

**Review of Pathyakara Ahara:** *Pathyakara Ahara* <sup>[17]</sup> regimen should be advised according to *Ashta Ahara vidhi Vishesh Ayatana* as follows:

TIME	NAME	CONTENTS and QUANTITY
AT 10 am – 11 am	Lunch	1. Sponge gourd / Ridge gourd / Bottle gourd / Bitter gourd / Drum stick : as required 2. Roti mainly <i>Jwar</i> or <i>Ragi</i> : 2 Roti (appro.30gm each)
AT 4pm – 5pm	Liquids	Butter milk / Lime water / Kokam water : 1glass(200ml)
AT 6pm – 7pm	Dinner	1. <i>Jwar</i> or <i>Ragi</i> roti : 1 2. <i>Kultha Daal</i> or <i>Mug Daal</i> : 2 bowl(400ml) 2. <i>Laja</i> : 100gms

NAME	RASA	VIRYA	GUNA	VIPAKA	DOSHAGHNATA	ROG-GHNATA
Sponge Gourd	<i>Madhur</i>	<i>Sheet</i>	<i>Laghu, Snigdha</i>	<i>Madhur</i>	<i>Tridoshaghna</i>	<i>Lekhan, Ruchya</i>
Ridge Gourd	<i>Madhur, Tikta</i>	<i>Sheet</i>	-	-	<i>Tridoshaghna</i>	<i>Deepan, Jwar Klamhar</i>
Bottle Gourd	<i>Madhur</i>				<i>Tridoshaghna</i>	<i>Mutral, Aruchihar, Klamhar</i>
Bitter Gourd	<i>Tikta, Katu</i>	<i>Sheet</i>	<i>Bhedi, Laghu</i>	<i>Katu</i>	<i>Kaphapittaghna Vatkar</i>	<i>Pramehhar, Jwarhar Deepan</i>
Drum stick	<i>Madhur, Katu, Tikta</i>	<i>Ushna</i>	<i>Deepan, Laghu, Tikshna, Ruksha</i>	<i>Katu</i>	<i>Kaphavathar, Pittakar</i>	<i>Medohar, Shukral</i>
Green gram	<i>Madhur, Kashay</i>	<i>Sheet</i>	<i>Ruksha, Grahi, Laghu, Vishad</i>	<i>Katu</i>	<i>Kaphapittahar</i>	<i>Kaphahar, Medohar, Jwaraghna</i>
Horse gram	<i>Madhur, Kashay</i>	<i>Ushna</i>	<i>Ruksha, Laghu, Ushna</i>	<i>Amla</i>	<i>Vatpittakar, Kaphahar</i>	<i>Medovikar, Mutral</i>

### Review of certain herbal medicines:

*Charaka* has mentioned different herbal medicinal therapy in the form of *Kwath* formulation to relieve *Dhatvagni Mandya* in different *Dhatugat Jwara*.<sup>[18]</sup> Similar *Kwath* formulations can be used in PCOD also to cause *Dhatvagni Dipan* so that

*Avarodha* at *Aartav Vaha Srotasa* can be relived and proper nutrition of *Aartav Dhatu* can takes place correcting PCOS symptoms. The herbal medicines are *Vatsak*, *Patol*, *Kutki*, *Sariva*, *Nimba*, *Triphala*, *Mrudvika*, *Mustha*, *Guduchi*, *Vishva*, *Chandan* etc.

Drug	Latin name	Rasa	Vipak	Virya	Guna	Part used
<i>Vatsaka</i>	Holarrhena Antidysenterica	<i>Tikta, Katu</i> <i>, Kashay</i>	<i>Katu</i>	<i>Sheet</i>	<i>Laghu,</i> <i>Ruksha</i>	Seeds
<i>Patol</i>	Trichosanthes	<i>Tikta</i>	<i>Katu</i>	<i>Ushna</i>	<i>Laghu</i> <i>Ruksha</i>	Panchang
<i>Kutki</i>	Picrorhiza kurroa	<i>Tikta</i>	<i>Katu</i>	<i>Sheet</i>	<i>Laghu,</i> <i>Ruksha</i>	Roots
<i>Sariva</i>	Hemidesmus indicus	<i>Madhur,</i> <i>Tikta</i>	<i>Madhur</i>	<i>Sheet</i>	<i>Guru, Snigdh</i>	Roots
<i>Nimba</i>	Azadirachta Indica	<i>Tikta,</i> <i>Kashay</i>	<i>Katu</i>	<i>Sheet</i>	<i>Laghu</i>	Flowers, leaves, Bark, oil
<i>Triphala</i>		<i>Kashay</i> <i>prominent</i> <i>Madhur,</i> <i>Amla, Katu</i> <i>,</i> <i>Tikta</i>	<i>Madhur</i>	<i>Anushna</i>	<i>Laghu,</i> <i>Ruksha,</i> <i>Sara,</i> <i>Anushna</i>	Fruits
<i>Draksha</i>	Vitis vinifera	<i>Madhur</i>	<i>Madhur</i>	<i>Sheet</i>	<i>Snigdha, Sara</i> <i>,</i> <i>Sheet,</i> <i>Vrushya</i>	Fruits

<i>Musta</i>	<i>Cyperus rotundus</i>	<i>Katu,</i> <i>Tikta,</i> <i>Kashay</i>	<i>Katu</i>	<i>Sheet</i>	<i>Laghu,</i> <i>Ruksha</i>	Roots
Guduchi	<i>Tinospora cardifolia</i>	Kashay, Tikta	Madhur	Ushna	Laghu, Snigdh	Bark
Vishwabhesaj	<i>Zingiber officinale</i>	Katu	Madhur	Ushna	Guru,Tiksha, Ruksha	Rhizome
Chandan	<i>Santalum album</i>	Madhur, Tikta	Katu	Sheet	Laghu, Ruksha	Bark

### Discussion:

*Sushruta* has mentioned *Aartav vaha Srotas* just to perform its functions but actual formation of *Aartav* takes place in the *Rasvaha Srotasa* only by the action of *Ras Dhatvagni*. Therefore any pathophysiology of most of the gynaecological disorders start from vitiation of digestive fire (*Agni*) especially vitiation of *Ras Dhatvagni*. Therefore management and treatment of PCOS should include *Pathyakara Ahara* and medicines so that *Dhatvagni Dipan* can take place and PCOS can be corrected. For the management, *Nidanparivarjan Chikitsa, Karshan Chikitsa, Dhatvagni Dipan Chikitsa, Aagneya Dravya Yojana* should be done. Taking account of all the above references, *Pathyakara Ahara* and the medicines mentioned in *Dhatugat Jwara* to cause *Dhatvagni Dipan* can be used to treat PCOS. For *Nidanparivarjan*, the *Kaphakar*

*Ahara (Snigdh, Sheet, Madhur, Picchila), Adhyashan, Viruddhashan, Divaswap, Avyayam* should be excluded from the daily routine of life. For *Karshan chikitsa*, the *Pathyakara Ahar* should be followed. The food substances included in the diet are mentioned above have *Laghu* (easy to digest), *Ruksha* (decrease fat from the body), *Ushna* (hot) etc properties which have exactly opposite properties to that of the vitiated *Kapha* and *Ama Ras* and perform *Dipan, Pachan, Medohar, Kaphaghna, Jwarghna* etc actions in the body which directly decreasing the production of *Ama Ras* and excess of *Meda* thus in turns regulating normal functioning of *Aartav*. For *Dhatvagnimandya*, the herbal medicines mentioned for *Dhatvagni Dipan* are *Vatsak, Patol, Kutki, Sariva, Nimba, Triphala, Mrudvika, Mustha, Guduchi, Vishva, Chandan ect.* should be used. These have *Katu, Tikta,*



*Kashay Ras, Ushna Virya, Katu Vipaka and Laghu, Ruksha* ect *Guna*. Due to these properties these medicines can perform *Kaphahar, Lekhan, Dipan, Pachan* functions inhibiting formation of *Ama Ras* and decreasing excess of *Meda* from the body. In this way *Medas Avrutta channels* get cleared as result of this, *Dhatvagni Dipan* can take place indirectly *PCOS* can be corrected. According to different animal studies, it is established that various known bioactive metabolites in above herbal plants extract especially phenolic and flavonoid compounds inhibit pancreatic lipase (PL) secreted by the pancreas. Pancreatic lipase is a key enzyme that is responsible for the absorption of free fatty acid and digestion of 50 -70% fat into monoglyceride which results in the reduction of accumulation of fat in adipose tissue thus decreasing obesity. The presence of phenolic compounds demonstrate peroxide decomposition, free radical inhibition, metal inactivation or oxygen scavenging in the biological system and thus reduce the burden of oxidative disease. Moreover, it has been reported that natural polyphenols exert lipid lowering effects through several mechanisms including inhibiting pancreatic lipase activity and

decreasing absorption of lipids and proteins in the intestine, thus reducing calorie intake, suppressing appetite, impairing adipogenesis, enhancing the activation of AMP-activated protein kinase in the skeletal muscle, liver and adipose tissues and improving systemic inflammation, insulin resistance and hyperglycemia.<sup>[20]</sup> The meta-analysis including eighteen studies and 300 animals shows that flavonoids efficiently break the pathology of PCOS, especially corrects ovarian histomorphology and hormonal status. It also analyzed how different types of flavonoids influenced various phenotypes in animal models induced by different drugs. Specifically, the count of atretic follicles, the count of cystic follicles, LH, LH /FSH and FT reduced and the count of corpus luteum increased in the groups where animals were administered with flavonoids.<sup>[22]</sup>

### Conclusion:

With all the above references , it is proved that together the *Pathyakar Ahara* with natural herbal medicines can be effective in the management of PCOS.

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