

A CRITICAL REVIEW OF POLYCYSTIC OVARIAN SYNDROME MANAGEMENT BY CHANDRASHUR CHOORN (LEPIDIUM SATIVUM)

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ABSTRACT

Maternal health remains a staggering challenge, particularly in the developing world. Globally woman dies from complications in pregnancy and childbirth. Women with pcos struggle to become pregnant and are at higher risk of developing complications during pregnancy. 70% of women with pcos hadn't been diagnosed. It is a physiological disorder that causes many abnormal effect on endocrine, metabolic, psychological and reproductive system. PCOS disrupt the menstrual cycle, leading to fewer periods, acne, hair growth, weight gain and dark skin patches. There is no direct reference of pcos in ayurvedic text. Some of clinical features may simulate with

granthibhoota artavdusti. Vata and kapha dusti seen in grantibhoot artavdusti. Major symptoms are artavkshaya and nastartav need to treated with agney dravya. Chandrashur choorna has properties of agney dravya-ushna, tikshn etc. which removes srotorodha, improve dhatu metabolism by removing ama by pachan, produce artav by pittapradhanta. Also it contains phytochemicals that resembles estrogen action, thus improve menstrual irregularities.

KEYWORDS: polycystic ovarian syndrome, pcos, pcod, chandrashur choorna, lepidium sativum.

INTRODUCTION

Maternal health remains a staggering challenge, particularly in the developing world. Globally a woman dies from complications in pregnancy and childbirth. Women with pcos

struggle to become pregnant and are at higher risk of developing complications during pregnancy.

Polycystic ovarian syndrome is a multifactorial condition. It is an extremely common endocrinological disorder, being one of the major causes of female infertility. Its prevalence rate being 20 – 30% of women of reproductive age (12-45 years). PCOS is a heterogeneous disorder presenting with irregular menstruation, infertility due to anovulation, polycystic ovaries, hyperandrogenism, insulin resistance, obesity, type 2 diabetes and raised cholesterol levels.

Now-a-days, prevalence of PCOS is increasing due to change in the lifestyle and increasing stress. Childlessness affects the women psychologically and lowers her self-esteem. Besides infertility, other symptoms associated with PCOS (like hirsutism, obesity, acne and weight gain) can affect self-esteem of the women. It thus affects the women on all levels- physical, mental and psychological level.

As PCOS is not directly mentioned in Ayurveda as one disease but its symptoms can be found under various diseases. Thus one of the major symptom of PCOS, i.e artava shaya and nastartava. some of clinical features may simulate with granthibhoota artavdusti.vata and kapha dusti seen in grantibhoot artavdusti. Major symptoms are artavkshaya and nastartav need to treated with agney dravya.

Chandrashur choorna has properties of agney dravya -ushna, tikshn etc., which removes srotorodha, improve dhatu metabolism by removing ama by pachan, produce artav by pittapradhanta. Also it contains phytochemicals that resembles estrogen action, thus improve menstrual irregularities.

POLYCYSTIC OVARIAN SYNDROME

PCOS is the most common endocrine disorder in women of reproductive age group, affecting 10 to 15% of women exhibiting the full blown syndrome of hyperandrogenism, chronic anovulation and polycystic ovaries. It was originally described by Stein and Leventhal in 1935, so called as “Stein-Leventhal Syndrome”.

Pathology

The pathology of polycystic ovary is the result of a vicious cycle, which can be initiated at any one of many entry points. Altered function at any point in the cycle leads to the same

result: the polycystic ovary. A more accurate concept is that the polycystic ovary is a consequence of the loss of ovulation and the achievement of the steady state of persistent anovulation. The surface area is doubled, giving an average volume increase of 2.8 times.

The same number of primordial follicles is present, but the number of growing and atretic follicles is doubled. Each ovary may contain 20-100 cystic follicles. The thickness of the tunica (outermost layer) is increased by 50%. A one-third increase in cortical stromal thickness and a 5-fold increase in subcortical stroma are noted (hyper thecosis). The increased stroma is due to both to hyperplasia of thecal cells and increased formation subsequent to the excessive follicular maturation and atresia.

The classic picture of the polycystic ovary is attained, displaying numerous follicles in the early stages of development and atresia. The loss of recycling has resulted in a hormonal steady state causing persistent anovulation that can be associated with an increase in the production of androgens and the bioavailability of oestrogen.

CLINICAL PRESENTATION

- Menstrual
 - abnormal menstruation
 - absence of menstruation(Amenorrhoea)
 - heavy menstruation(Menorrhoea)
 - irregular menstruation
 - short and light menstruation, or spotting(Oligomenorrhoea or hypomenorrhoea)
- Weight: obesity, overweight, or weight gain
- Skin: acne or oily skin, dark patches of skin in folds and creases
- Infertility
- Depression
- inappropriate male features
- loss of scalp hair, or unwanted hair

Investigations

- The diagnosis of the disease (PCOS) is a combination of Clinical symptoms, Biochemical markers (raised LH and altered FSH/LH ratio).
- Ultrasonography: Transvaginal ultrasound (TVS) is the most accurate and is specially useful in obese patients.

Risk factors of pcos

- Abdominal obesity (waist circumference >88cm or 35 inches)
- Triglycerides >150mg/dl
- HDL-C <50mg/dl
- Blood pressure >130/85
- Fasting blood sugar of 110-126 mg/dl and 2-h glucose tolerance test of 140-199mg/dl

Treatment of Pcos

The contemporary treatment of PCOS can be summarized as follows

- If Body Mass Index is elevated, loss of at least 5-7% body weight may restore ovulation in up to 80% obese patients possibly by reducing hyperinsulinaemia and thus hyperandrogenism.
- This is followed by induction of ovulation (OI) with Clomiphene citrate. Subsequently, administration of insulin sensitizer with Clomiphene is advisable.
- Gona-dotropin therapy and FSH hormone are the next option followed by Gonadotropins with insulin sensitizer.
- Metformin (Glucophage) is a drug of choice that increases ovulation and simultaneously reduces the problems caused by insulin resistance and regulates the excessively raised levels of the andro-gens.
- Anti androgenic therapy to reduce the masculine effects of testosterone like alope-cia, hirsutism etc.
- LOD(Laprosopic ovarian drilling).

AYURVEDIC PERSPECTIVE OF PCOS

Ayurveda describe pcos to have an equal involvement of the Dosha, Dhatu and Upadhatu. It does not correlate the condition to a single disease or syndrome but the symptoms bear a resemblance to the terminologies defined as *Anartava'* (Amenorrhoea), *'Yonivyapad'* (anatomical and physiological disorders of the reproductive system) like – *Arajaska* (Oligomenorrhoea due to vitiation of Vata Dosha), *Lohitakshaya* (Oligomenorrhoea due to vitiation of Vata-Pitta Doshas), *Vandhya* (infertile), *Pushpaghni Revati* (Idiosyncratic anovulatory menstruation), *Abeejata* (anovulation), *Rajodushti* and *Ashtartava Dushti* (menstrual flow disorder due to vitiation of Doshas) etc.

Pathology of PCOS includes cyst formation and accumulation in periphery of ovary, some learned ayurvedic gynaecologists compare the condition of PCOS with '*Granthibhuta Artavadushti*'. When the deranged *vata* starts vitiating *mamsa*, *shonita* & *meda* mixed up with kapha, they produce circular, raised & knotted inflammatory swelling called *granthi*. The cysts in PCOS can be compared to *granthi*. In PCOS, development of follicles gets arrested at a level and remains as it is. The cysts are follicles at varying stages of maturation & atresia, so ovulation does not occur. Thus, this pathology is compared with *granthibhuta artava dushti*. the term '*artava*' is used for ovum too. So in *granthibhuta artava*, the *artava* (ovum) becomes *granthibhuta* i.e. cyst formation occurs, as in PCOS the follicles become cysts instead of developing into graafian follicle and then ovulating.

The terms Raja and Artava have been used synonymously or otherwise in the classics. Usually Raja is considered as the Upadhatu of Raktadhatu whereas Artava as the Saptam Dhatu itself. Similarly their Srotasa (channels) are also two entirely different entities.

AYURVEDIC MANAGEMENT OF PCOS

The management approach to PCOS should concentrate on treating Agnimandhya at Jatharagni and Dhatwagni level and alleviating srotavarodhana and ultimately regularizing the Apana Vata.

Artava is an Upadhatu, formed from Rasa within a month after proper metabolization of Rakta dhatu by its Dhatwagni and Bhutagni. The decrease or kshaya of Rakta dhatu causes Artava kshaya and simultaneously Rakta kshaya is developed. Maharshi shruta has mentioned that Artava is Agneya. In Artava Kshaya, Agneya or Pitta and simultaneously Rakta and Artava are increased.

Drug Review

Chandrashur choorna

- Latin name: *Lepidium sativum*
- Family: *Cruciferae*
- Kula: *Rajika Kula*

Properties

- Gun: -laghu, Snigdha, Pichchil
- Ras: -Katu, Tikta (pungent, bitter)

- Vipak:-Katu(pungent)
- Virya:-Ushna(hot)
- Effect on Tridosha:-Balance Kapha and Vata

To understand the Samprapti of Artava Kshaya in pcos it is important to know about the formation of Rasa dhatu. As Artava is the Upadhatu of Rasa dhatu, the Kshaya of Rasa Dhatu finally leads to Kshaya of Artava. Formation of Rasa Dhatu is affected when there is Jataragni mandhya. This Mandagni with vitiated Doshas hamper the formation of Ahara Rasa by producing Ama. Hence Utpatti of Rasa Dhatu is affected as it is formed from Ahara Rasa. Since the 'Samprapti vighatana' is the main aim for The proper Artava utpatti, which can be achieved by Maintaining the normalcy of the Agni. Normalcy of Apana Vata helps in expulsion of Artava. Garbhashaya & Artavavahini dhamani are Mula for Artavavaha srotas. If There is any injury to this, leads to Nastartava. Aratavavaha srotas are obstructed by the Vikruti of Apana Vata & Kapha, results in Artava Kshaya in pcos.

To maintain normalcy of Agni & Vata, removing The Kapha is the basic line of treatment. In the classics both Shodhana & Shamana Chikitsa has been explained for pcos. Shamana Chikitsa is explained in the form of 'Agneya dravyas'.

Probable Mode Of Action

Chandrashur used as it is Pittavardhakar. By this the Agni is stimulated which helps In digestion of Ama, formation of Ahara Rasa, which later On forms the Rasa dhatu from which the Artava is formed. These Agneya dravyas helps in increasing the quantity of Artava, as the Artava is also Pitta pradhana. As the basic Concept of "Samanyam vrudhikaranam" intake of Samana Guna causes the increase of same Guna. Hence the chandrashur given prime importance in producing Artava. Use of Agneya dravyas not only relieves the kapha which does Avarana to Apana vata but also increases the Quantity of Artava. As it has Ushna virya, it Maintains the normalcy of Ruksha & Sheetaguna of Vata, Snigdha & Pichhila Guna of Kapha.

It increases follicular size: This may because of removal of Sanga by Kapha-Vata Shamaka Srotoshodhana, Aama Pachana, etc. After removal of Sanga created by vitiated Kapha and Ama in Artavavaha Srotas, Apana Vata functions well leading to normal Rajah Pravritti and Beeja Nirmana. It decreases LH level thus preventing premature lutinization. Thus normal FSH level stimulates growth and development of follicle.

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