



Case Study

A CASE STUDY ON OPD LEVEL MANAGEMENT OF INFERTILITY DUE TO PCOS WITH AYURVEDIC MEDICINES

Anila.M¹, Sruthi L.R^{2*}

¹Assistant Professor, ²PG Scholar, Department of Prasutitantra and Streeroga, Government Ayurveda college, Thiruvananthapuram, Kerala, India.

Article info
Article History:
Received: 15-03-2023
Revised: 04-04-2023
Accepted: 19-04-2023

KEYWORDS:
Infertility,
Polycystic
ovarian
syndrome,
Nasarthava,
Vandhyatva.

ABSTRACT

PCOS is the primary cause of Hyperandrogenism and oligo-ovulation at the reproductive age and is often associated with infertility. The prevalence of infertility in women with PCOS varies between 70 and 80 %. In Ayurveda, *Vandhyatva* is considered as one among the *Rasa pradoshaja vikaras*. This is case report of an infertile couple who had not been able to conceive since 4 yrs. The wife was diagnosed with PCOS. Based on the parameters of Ayurvedic science this case was diagnosed as *Vandhyatva* (infertility) due to *Nasarthava* (PCOS). The treatment plan for PCOS is to correct the menstrual irregularity and ensure proper ovulation, this itself helps to develop healthy progeny and successful childbirth. The treatment principles selected here were mild *Shodhana* and *Samana* therapy especially *Vatakaphahara*, *Agni deepana* along with *Pathya ahara*. After two and half month of internal medications, reduction in abnormal hair growth, blackish discolouration and weight were noticed. The outcome of the treatment resulted in natural conception and delivered a full term male baby. So this case signifies effect of Ayurvedic science in the management of infertility.

INTRODUCTION

Infertility is a significant clinical problem affecting 8-12% of couples worldwide. According to AIIMS, about 10-15 percent of couples in India are said to have fertility issues.^[1] Infertility is defined as the inability to conceive within one or more years of regular unprotected coitus. Infertility can be primary or secondary. The female causes which directly responsible for infertility is about 40-55% and combined is about 10% cases. The remaining 10% is unexplained.^[2] While considering the causes of female infertility 30-40% is contributed by ovulatory dysfunction. Among the ovarian factors several conditions are there like anovulation, oligo-ovulation decreased ovarian reserve, etc. Among the anovulatory causes of infertility, polycystic ovarian syndrome plays a major role.^[3]

Polycystic ovarian syndrome is a multifactorial condition. It is diagnosed by Rotterdam criteria, which includes oligo and or anovulation, hyperandrogenism (clinical and or biochemical) presence of ovarian cysts on USG findings.^[4] Infertility is a frequent complaint in women with PCOS and results from anovulatory cycles. PCOS presents in 5-8% of general population and 40% of woman with infertility.^[5]

In Ayurveda, infertility is explained as *Vandhyatva*. It is also mentioned in *Rasa pradoshaja vikara*. *Vata* is the main causative factor for *Vandhyatva*. Susruta had explained factors responsible for successful pregnancy (*Garbha sambhava samagri*) in detail. They are *Rithu*, *Kshetram*, *Ambu*, *Beejam*.^[6] Any abnormality in any of these four can lead to infertility. *Rithu* stands for fertile period in the cycle. *Kshethram* represents healthy reproductive organs. *Ambu* represents proper nutrition after fertilization. It can be correlated with corpus leuteal function upto the establishment of placenta and then onwards placental function. *Beejam* stands for healthy ovum and sperms. Acharya Charaka opines that *Soumanasyam* (peaceful mind) is best remedy for getting a progeny.^[7] So psychological factors are important in conception. According to Vagbhatacharya,

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Quick Response Code	
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Shudha (purified) *Sukra* and *Arthava* are the essentials for conception. Acharya also mentioned about the purified form of *Garbhasaya*, *Marga*, *Rakta*, and *Sukra* along with normal function of *Anila* and *Hridi* are the factors important in conception.^[8]

A direct correlation of PCOS in classics is not available. Features of *Nashtarthava* are seen in PCOS. In *Nashtarthava Vata* and *Kapha dosha* is vitiated here, so treatment should be *Vata kapha hara*, and *Agni deepana*, *Vata anulomana*, *Rasa pradoshaja chikitsa* were adopted.

Case Report

A female subject of 30 years age, residing in Thiruvananthapuram, Kerala came to OPD of Dept of Prasutitantra and Streeroga GAVC, TVPM complaining of inability to conceive a viable child even after 4 years of married life.

An apparently healthy woman attained her menarche at the age of 12 years. She has irregular cycles since then, so she took homeo medicines for 6-8 months, but didn't get a regular cycle. She also had weight gain during her adolescent period. Pattern of weight gain was varying for 3-5kg depends on her food habit and exercise. So for the above complaints she consulted a physician and was diagnosed with thyroid dysfunction and took medication, but discontinued it herself after few months because of her fear for blood test. From 2015 onwards she took thyroid medication (thyronorm 100mg) continuously. On USG (2012) she was diagnosed with bilateral PCOS and took medications for short duration. She has complaints of abnormal hair growth over face and blackish discolouration of neck. She was known case of insulin resistance. At the age of 26 years she was married to an NCM of 26 year, they were staying together but she didn't conceive naturally for 4 years. So she consulted OPD of Prasutitantra and Streeroga GAVC TVPM and underwent Ayurvedic treatment.

Menstrual History

Menarche: 12 years

Irregular cycle with 4-6 months interval

LMP: 10/2/21(After intake of medicine for 1 month)

PMP1: 10/1/21

PMP2: 6 month back

Interval: 4-6 months

Duration: 4-5 days

Amount: Moderate bleeding

No of pads: D₁ – 3 pads/day

D₂ – 4/day

D₄, D₅ – 2/3 pads/day

Clots: D₁, D₂

Dysmenorrhea: Present, mild

P/V Discharge

Discharge with varying consistency (occasionally watery, curdy white, egg white)

Mucoid

Itching: Present

Odour: Nil

Obstetrical History

G₀

Marital History

Since 2016

Married age: 26 years (both)

NCM

Sexual History

Dyspareunia: Nil

PCB: Nil

Vaginal dryness: Nil

Aware of fertile period

Personal History

Bowel: Regular

Appetite: Good

Bladder: Regular

Sleep: Normal

Allergy: Nil

Food Habits: Fond of junk foods like, Chicken, beef, fried food, shawarma, pastries, ice creams.

Past Illness

Hypothyroid- Thyronorm (100mg) for 6 years (since 2015 onwards)

PCOS (2012)

Psychological Status

Job related stress

Gynaecological Examination

Inspection

Vulvitis - Present

Labia- Normal

Slight mucoid discharge present externally

Cystocele - Absent

Rectocele - Absent

Urethrocele – Absent

P/S Examination

Vagina- Normal

Cervix –Mid position, healthy

P/V Examination

Anti-verted uterus

Cervix- Mid-position

CMT- Negative

Free fornices

Bilateral iliac fossa tenderness – Negative

Investigation**Urine routine:** Within normal limit**Blood routine**

Insulin resistance was present

Insulin: 18.02 U/ml (13/4/21)

Thyroid dysfunction present

T3-1ng/ml

T4-9µg/dL

TSH-3 microU/ml (under thyronorm 100mg)

USG

Both ovaries showed multiple small peripheral follicles appear like PCOS.

Impression: bilateral PCOS

Male factor: Normozoospermia**Chikitsa**

In order to achieve *Deepana pachana*, *Vatanulomana*, *Gandarvahastadi Kashaya* and *Gandarvahastadi thailam* were given. After proper *Agni* formation *Virechana* was given for the purpose of *Shodhana*. Then administered *Kumaryasavam*, *Punarnavasavam*, *Mandoora vatakam* for menstrual regulation and ovulation induction. *Guggulu panchapala choornam* and *Mahathiktakam* ointment were given for her vaginal itching.

Table 1: Treatment plan

Drug	Dosage
<i>Gandarvahastadi Kashaya</i>	90ml twice daily before food
<i>Gandarvahastadi thailam</i>	1 tsp at evening
<i>Vara choornam</i>	1 tsp with hot water at evening
<i>Kumaryasavam & punarnavasavam</i>	30ml twice daily after food
<i>Guggulu panchapala choornam</i>	1 tsp with honey 2 times after food
<i>Mandoora vatakam</i>	1 bd with honey & lemon juice
<i>Mahatiktakam ointment</i>	External application for vulval itching

Virechanam*Gandarva erandam* -30ml

Ginger juice- 5ml

Lemon juice -5ml

Nirgundi swarasa- 10ml

Salt - 2 pinch

Honey -5ml

***Gandarvahastadi kashayam*^[9]**

This *Kashaya* is indicated in *Vata* vitiated conditions so it helps in proper *Vatanulomana*, improves the digestive fire (*Deepana & Pachana*). *Kashaya* having 56% of *Tikta*, *Kashaya rasas*, it will help to reduce the *Srothorodha* caused by *Kapha dosha*. Hence *Srothoshodha* will occur. Here *Vata* and *Kapha* is the main *Doshas* for infertility due to *Nastartava*. Because of its *Deepana*, *Pachana*, *Vatanulomana* properties it will help normal function of *Apana vayu* (*Arthava* and *Garbha nishkramana*).

Gandarvahastadi Thailam

Erandam is the main ingredient in this yoga, having property like *Ushna*, *Snigdha*, *Guru* and *Anulomaguna*. Hence it is used as a preferred drug to treat *Vata*. Most of the drugs in this yoga are *Vata-kapha samana*. *Erandam moola* have *Vrishya* and *Vatahara* property.^[10] *Erandatailam* is *Sookshmam*, *Srothovishodhanam*, *Vrishyam*, *Yonisukra vishodhana*, *Vatakapha hara*, and *Adhobhaga dosha haram*.^[11] Since the condition is clearly *Vata kapha dosha pradana*. Here our treatment principle also *Vatakaphahara*.

Vara choornam

Vara is *Rasayana varam*. Previous studies indicated that *Triphala* was multifunctional including antimicrobial, antioxidant, anti-inflammatory activities-immunomodulatory. Hence it protects the body from free radicals, inflammatory and mutagenic changes. The main purposes of *Triphala* currently used as lipid lowering, blood glucose- lowering, anti-obesity.^[12] Due to its hypoglycemic action it reduces insulin resistance. It also have *Srothoshodhana* property.

***Kumaryasavam*^[13]**

It has included under *Vrishya* or aphrodisiac groups, having *Agnideepana* property. Yoga itself has indicated in *Sukra dosha*, *Vimsati mehajan* and *Udavartha*. Here the patient is suffering from insulin resistance so this yoga will help to reduce the condition. Hence it is effective in *Udavartha*, it having the property of *Vata anuloma* and helps the normal function of reproductive system. So this *Asava* having properties of *Vata* and *Kapha samanam*, *Deepana pachanam arthava pravarthakam* can be useful in *Nashtartha* condition.

***Punarnavasavam*^[14]**

Yoga is indicated in *Shodha hara*, so it helps in *Srothoshodhana*. *Gulma hara* property will help to *Vata Anulomana* and *Arthava nishkramana*. As SHBG plays a vital role in the occurrence and development of PCOS, this yoga is useful in *Yakrit vikara* which helps to activate the liver proteins like SHBG. It has antioxidant, blood purifier, anti-inflammatory and rejuvenating

properties. Due to above properties it helps to regulate the symphony of hypothalamo pituitary ovarian axis. Normal function of HPO axis leads to proper ovulation which is necessary for successful conception.

Guggulu panchapala choornam [15]

It is a yoga described in *Bhaganthara prakaranam*. It relieves *Kushta, Bhaganthara, Gulma* and *Nadivruna*. *Guggulu* is *Tridosha samaka, Vatasamaka* due to *Ushna veerya* and *Kaphahara* because of *Tikta katu Kashaya rasa, Ushna virya, Katu vipaka*. Here since the patient had complaints of vaginal discharge and itching. This medicine was given initially to reduce the infection.

Mandoora vatakam

It is described in *Ashtanga Hridaya Pandu chikitsa* [16] and *Sahasra yogam gutika prakarana*. [17] Yoga is *Pranada panduroginam*, hence proper formation of *Rasa* and *Raktha dhathu* is essential for the *Upadhatu (Arthava)* formation. Since in this patient the chief complaint was *Nashtarthava*. It is also beneficial in *Arsas*, hence it will help to *Apana vayu anulomana* and *Arthava pravarthi*.

Virechanam

Virechana karma was chosen for *Shodhana*. *Acharya Susruta* opines that *Virechana* will help for *Bhudhi prasada, Balamindriyanam, Dhathu sthiratwam, Balamagni deepthi*. [18] *Acharya Charaka* explained that *Samayk virechana* causes *Srotho vishudhi, Indriya prasada, Urjo agni*. [19] *Acharya Kasyapa* opines “*Beejam bhavathi karmukam*.” [20] Due to the effect of *Virechana* the *Beeja* (sperm, ovum) becomes efficacious, hence it acts on germ cells and improve the quality of germ cells.

The regular elimination of vitiated *Doshas* from the body is essential to enhance the metabolism and digestive power, and this process of elimination is carried out smoothly by *Virechana*. It is the process which helps to improve the quality of *Beeja*. Here we used *Gandarva erandam* which helps for *Vatanulomana, Saindhava* process *Sookshma guna*, it helps to penetrate the *Sookshma srotas* and helps to dissolve the aggravated *Kapha*. Hence while doing *Virechana*, the corrected *Agni* will lead to proper *Dhathu* formation through which *Upadhatu (Arthava)* also formed.

Advice

Green leafy vegetables like broccoli spinach are advised to be taken

High fibre food should be included in diet.

Regular exercise and yoga.

Avoid processed and high calorie food.

Avoid junk food.

Avoid stress factors.

RESULT

After taking up treatment interval of menstrual cycles of the patient reduced from 6 months to 3 months. Also there was reduction in complaints like abnormal hair growth over face, blackish discoloration over neck. She also reduced 12kg weight after the treatment. She conceived after 2 and half month of treatment and gave birth to a male baby.

DISCUSSION

In this particular case, we can see that the patient was having polycystic ovarian syndrome leading to infertility. On the basis of history, clinical examinations and investigations, it was *Vandhyatha* (infertility) associated with polycystic ovarian syndrome (*Nashtarthava*). Considering the *Nidana* of the disease she had habit of intake of junk food, chicken, beef, fried, shawarma, pastries, regular intake of ice creams etc. these all are leads to *Kapha vridhi, Agni mandya* thereby *Srothodushti*. Lack of exercise and long duration of sitting habit lead to *Kapha vridhi*. All together causes the formation of *Aama* in *Rasadhatu* which may lead to the *Arthava upadhatu dusti*. *Abhishyanthi aharas* like pastries, shawarma ice creams leading to *Kapha medo dusti* and *Srothorodha*. Here the movement of *Vata* especially the *Apana vata* got obstructed by the increased *Kapha* which in turn obstructed the natural functioning of *Arthava*. Job related stress, anxiety may lead to *Vata vaigunya*, which effects the proper function of *Apana vata*. “*Doshairavrittha margatwath arthavam nashyathi streeya*” [21] vitiation of *Vata* and *Kapha* causes *Arthavavaha srothorodha* leads to *Beejaroopa arthavadushti* and further to *Nashtarthava*.

Samprapthi ghatakas are *Vata kapha dosha*. *Rasa raktha* and *Arthava dushya*. *Srothas* involved are *Rasa, raktha, Arthava vaha*. *Nidana sevana* leads to *Jadaragni mandhya*. *Sanga* type of *Srothodusthi* occur.

Here the line of treatment should be *Kaphahara, Vata anulomana, Agni deekaka, Pachaka*, and *Srothoshodhana*.

CONCLUSION

PCOS is a common gynecological disorder which may lead to infertility. As *Arthava* is *Upadhatu* of *Rasa dhathu*, vitiation in *Rasadhatu* due to *Jadaragni mandya* will lead to vitiation in *Arthava* production. The treatment protocols mainly aimed to correct menstrual irregularity, producing a healthy ovum through which normal conception can occur. According to Ayurveda each individual has unique body constituents, so the treatment also given according to individual body type. Here *Deepana, Pachana, Vata anulomana* drugs were given first, after correcting *Agni* then move on to *Shodhana*. After proper *Shodhana* menstrual irregularities were treated. Through the treatment we can improve the quality of the *Beeja*, regularize the cycle and associated

health problems also reduced. The Ayurvedic management was found to be very effective in infertility due to PCOS and the patient got conceived and gave birth to a healthy progeny. The result obtained in this single case study is encouraging and the protocol followed here can be used for trial in larger samples.

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Cite this article as:

Anila.M, Sruthi L.R. A Case Study on OPD Level Management of Infertility due to PCOS with Ayurvedic Medicines. International Journal of Ayurveda and Pharma Research. 2023;11(4):60-64.

<https://doi.org/10.47070/ijapr.v11i4.2772>

Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence

Dr. Sruthi L.R

PG Scholar,
Department of Prasutitantra and
Streeroga, Government Ayurveda
College, Thiruvananthapuram,
Kerala, India.

Email: lrsruthi25@gmail.com

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