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Case Report

Ayurveda management of infertility associated with Poly Cystic Ovarian Syndrome: A case report

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ABSTRACT

Infertility associated with Poly Cystic Ovarian Syndrome (PCOS) is a major cause of concern in the present generation among the reproductive age groups due to undesirable lifestyle changes. This is a case report of an infertile couple who had not been able to conceive since 11 yrs. The wife was diagnosed with PCOS. They underwent conventional treatments of primary infertility including IUI (Intra Uterine Insemination) and hormonal therapy both the treatments were unsuccessful. The objective of the present treatment included Ayurvedic management of PCOS, ensuring regular ovulation and thereby helping to develop healthy pregnancy and successful childbirth. Based on the parameters of Ayurvedic science this case was diagnosed as *Vandhyatva* (Infertility) due to *Nashtartava* (Amenorrhea). Treatment plan included both *Shodhana* (Purification) and *Shamana* (mitigation) therapies. During the treatment period she lost 20 kg of weight and regained regular menstruation thereafter. The outcome of the Ayurvedic intervention was the conception of the patient within 8 months of treatment and delivery of a healthy baby girl.

1. Introduction

Infertility is one of the predominant health issues faced by the married couple nowadays. Infertility is defined as the inability to conceive after 1 year of uninterrupted intercourse of reasonable frequency [1]. It is common in 10–15% of couples [2]. As per the current statistics male infertility problems constitutes 30–40% and Female infertility problems constitutes 40–55% and both are responsible in about 10% cases. Remaining 10% unexplained [3]. A critical evaluation on female infertility shows that ovulatory factors contribute almost 30–40% of the case. Among anovulatory causes of infertility, Poly Cystic Ovarian Syndrome (PCOS) plays a major role [4]. Diagnosis of PCOS is based on anovulation, elevated androgen levels and presence of multiple ovarian cysts on USG findings [5]. Most of the time these conditions are presented with signs and symptoms such as obesity, amenorrhea and hirsutism [6]. A direct description of Poly Cystic Ovarian Syndrome in classical *Ayurveda* Texts is not available. After considering clinical features, *Dosha* involvement management principles of *Vandhya*, [*Nashtartava*, *Sthaulya* (obesity)] [1–12] were adopted.

2. Patient information

Married couple who were school teachers, presented at private consultation OPD of home clinic with the complaint of inability to conceive even after 11 years of regular unprotected sexual life. The semen parameters of husband were found to be within normal limits. The wife, aged 32, had menstrual irregularities since past 9yrs. The menstrual history of the patient showed 6 days duration with an interval of 6–7 months between the next cycles. They underwent 10 years of hormonal treatment and Intra Uterine Insemination twice. Rapid weight gain observed during this time period. At their first OP visit her last LMP was 10/6/2018 which of course may be due to hormone induced withdrawal bleeding with the duration of 6 days. Patient complained itching on vagina along with abnormal vaginal discharge. Painful intercourse was also one of the main concerns Table 1.

3. Clinical findings

The patient was obese with a body weight of 95 kg and BMI of 34.89. There were clear evidences of acanthosis nigricans on neck and hirsutism with prominent hair growth on chin and upper lip during physical examination. The findings obtained on per vaginal

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and per speculum examinations were clitoromegaly, bulky uterus, eroded cervix and abnormal vaginal discharge. USG reports showed both ovaries with polycystic morphology, and 12 cc volume of each ovary. Uterus measured 75 × 34 × 38 mm and ante-verted.

4. Diagnostic assessment

On detailed evaluation of subjective and objective parameters patient was diagnosed as primary infertility associated with PCOS. From Ayurvedic perspective this condition could be considered as *Vandhyatva* associated with *Nashtartava* where *Avarana* (enclosure) of *Artavavavaha srotas* (channel transporting Artava) *Kapha Medo-duṣhti* and *Srotorodha* became the causative factors. Detailed analysis of her signs and symptoms showed the increase of *Vata Kapha* and reduction of *Pitta* [7]. Considering all those factors treatment principles of *Vandhya, Nashtartava* and *Medohara were* followed in this case.

5. Therapeutic intervention

Table 2.

These set of medicines were continued for a period of 3 weeks. Once the functioning of Agni is maintained through the above said group of medicines, *Shodhana* therapies were executed, which are detailed in Tables 3 and 4.

6. Follow-up and outcomes

After the treatment body weight of the patient reduced to 75 kg and BMI was found to be 27.43. Her menstrual cycle became frequency improved substantially. On per speculum examination it was observed that abnormal vaginal discharge and other visible changes due to cervicitis reduced considerably.

7. Discussion

The diagnosis was confirmed as primary infertility associated with PCOS. According to *Ayurveda* this disease is *Vandyatwa* due to *Nashtartava* where *Avarana* of *Artavavaha srotasa* becomes the chief causative factor [13, Sharira sthana 2/21]. The *Nidana* (causative factors) attributed could be *Avyayama* (sedentary) and intake of excess *Abhishyandi Ahara* leading to *Kapha Medo Dushti* and *Srotorodha*. Here the movement of *Vata* especially *Apana vata* got obstructed by the increased *Kapha* which in turn obstructed the natural functioning of *Arthava* also. According to Ayurveda disintegration of *Samprapti* (pathogenesis) is the way to treat any disease. In this case we can consider *Kapha* and *Vata* as *Dosha*, *Rasa*, *Rakta*, *Mamsa*, *Medas* as *Dooshya*. *Rasavaha, Rakthavaha, Mamsavaha, Medovaha* and *Arthava vaha* are involved in the etiopathogenesis of the disease. *Samga* (blockage) and *Granthi* (cyst) can be considered as their *Dushti karana* (vitiating factor). Site of origin of the disease is *Koshta* and the specific site of manifestation is *Garbhashaya* (uterus).

The ultimate aim of the treatment was to release the obstructed *Vata* and to enable its normal functioning in the *Koshṭa* especially in *Garbhasaya*. The obstruction was because of the accumulated *Kapha* in the channels of *Vata* especially in *Arthavavavaha Srotas*. The combination of *Chiruvilvadi kwahta* and *Vaisvanara Churna* is *VatakaphaShamana* in its action along with added benefits including kindling the Agni and alleviating the *Moodhavata*. The other set of medicine, *Nirgundyadi kashaya* and *Triphala gugulu* is also *Kapha Shamana* with an added property of *Kriminashana*. As a result, *Kapha* might have been pacified and thus the pruritus and abnormal vaginal discharge diminished. *Annabhedisindoora* is *Chedana, Lekhana, Vatakapha Shamana* with a specific action *Rajapravarthaka* when given with *Jambira Svarasa* as *Sahapana* it becomes *Deepana, Anulomana* and also induces the bleeding.

Once the expected outcome from *Purva karma* is obtained, it was decided to move to the next phase- *Shodhana* therapies. As *Kapha* and *Meda* became the key factors for the development of the disease, it was decided to opt *Ruksana* procedure as a preliminary step. *Udvarthana* along with *Takrapana* was *Kaphamedonasana* by default [[11], Sutrasthana 2/15], [[11], Sutrasthana 5/33]. It took 9 days to obtain *Rukṣaṇa* [[11], Sutrasthana 16/35]. The next step was *Snehapana* with plain *Sarṣhapa taila* which became the ideal medicine for *Snehana* in the conditions where predominance of *Kapha* and *Vata*. It was decided to go for *Accha Snehapana* and the initial dose given was 25 ml. It took total 6 days to observe the ideal signs and symptoms which were expected to occur after *Accha Snehapana*. After *Abhyanga Swedana* and *Utklesana, Vamana* was the selected *Shodhana* therapy because of the involvement of *Kapha doṣa* [[11], Sutrasthana 1/25]. The standard operative procedure of *Vamana* was carried out and the symptoms of *Samyak yoga* including *Pittadarsana* were obtained. Then *Virechana was* administed using *Gandharva hastadi eraṇḍa taila*.

It was decided to administer *Basti* as a next step because of the involvement of *Vatadoṣa.* Specific indications including *Rajonasa* also pointed to the necessity of *Basti Anuvasana basti* was given with *Pipalyadi Anuvasana taila* which is *Vata Anulomana* and

Table 1
Timeline.

Date	Observation/remarks	Treatment
9-9-2012	Delayed cycle. B/L PCOS AMH (Anti Mullerian Hormone) 9.89 ng/ml	Treatment initiated as per Modern medicinal protocol
20/2/2016	Induced folliculogenesis	IUI failed. Ceased treatment for 2½ years
11/10/2018	Irregular cycle, LMP:10/6/2018, body weight:95 kg, on USG both ovaries appeared polycystic, Endometrial thickness 7.5 mm	*Ayurveda* treatment initiated
7/01/2019	Menstruation on 30/12/2018	*Panchakarma* started
24/01/2019	Weight reduced:85 kg	*Basti* (enema), *Uttara basti*
22/06/2019	Weight reduced to 75 kg	Internal medicine given
8/07/2019	Dominant follicle Right ovaty:18*16 mm Endometrial thickness:11 mm	Advised *Phalasarpis, Kṣheerabala*
27/07/2019	UPT: Positive	Patient conceived.
8/03/2020	Female baby: 3.26 kg	Patient delivered on LSCS

Table 2
Therapeutic intervention.

Therapeutic approach	Medicines with dose	Specific advises
Deepana (carminative) *Pachana* (Digestive) *Anulomana Lekhana* (scraping) *Rajapravartaka* (Induces menstruation)	1) *Chiruvilvadi kwatha* [8] – 15 ml with 45 ml luke warm water and *Vaisvanara curna* [8] –5 gm early morning empty stomach. 2) *Nirgundyadi kwatha* [8]- 15 ml luke warm water and Tablet *Triphala gugulu* [9] 2 Nos. evening before food. 3) Tab.*Annabhedi sinduram* [10] 2 Nos with fresh lime juice as *Sahapana* at 2 pm.	Less oily less spicy pure vegetarian diet. Absolute restriction for deep fried food articles. Regular exercise for a period of 30 min Regular walking for a period of 45 min.

Table 3

Procedure	Medicines used	Duration	Remarks
Udvarthana, Takrapana	*Vara chruna* [[11], sutrsthana 6/159].	9 days	*Rukshana* attained
Snehapanam	*Sarshapa taila* [[11] Sutrasthana 5/59].	6 days	Vomiting and loose bowel noticed.
Abhyangam	*Dhanvantara taila* [[11], Sharirasthana 2/47].	1 day	
Utkleśana	Cooked *masha* as food [[11], Sutrasthana 6/21].	1 day	
Vamana	*Madanaphala kalka and Yashimadhu phaṇṭa* [[12],Kalpasthana1/13]	1 day	*Pittadarsana*
Virechana	*Gandharva hasthadi eranda taila*	1 day	After 15 days of *Vamana*
Anuvasana	*Pipalyaditaila* [[12],Chikitsasthana 14/131]	5 days	
Lekhana basti	*Erandamoola kwatha* ,*Dhanyamla*, *Pipalyadi tailam with Satapushpa and Sarshaspa as kalkam* and *Sanidhava.*	3 days	
Uttarabasti	*Mahanarayana tailam* [8] *with Kalyanakshara* [[11], Chikitsa sthana 8/140–143]	3 days	

KaphaShamana in nature [[11], Sutrasthana 19/2–3]. For achieving the complete relief from *Kaphamedovruddhi, Lekhana Basti* which is a modified form of *Eraṇḍa moola kvatha basti* was selected [[11], Kalpasthana 4/7–10]. *Uttarabasti* which forms the prime treatment in *Garbhasaya roga* was also administered during the course [[11], Sutrasthana 19/70]. *Mahanarayana taila* which is *Brimhna, Vata-Shamana* with an added indication in *Vandhyatva* was selected as *Uttara Basti* medicine. *Uttara Basti* was repeated on 12th, 13th and 14th days of her next menstrual cycle. *Shodhana* treatment may have contributed in reduction of fat deposits and acceleration of the maturation of graffian follicles. Thus, the follicles ruptured and ovulation occurred detected in USS on 8/07/2019. She was given *Phalasarpis* to improve quality of endometrium and achiveving *Garbhasthapana*. Urine pregnancy test was suggested after a week of absence of menses and the result found to be positive [[11], Utaratantra 34/63–67].

Table 4
Medicines used.

Serial Number	Medicines	Description
Kwathas		
1.	Chiruvilwadi kwatha	Indicated in Arshas and agnimandya
2.	Nirgundiadi kwatha	Mainly indicated in Krimi especially Koshta gatha Krimi
3.	Erandamoola kwatha	Used as decoction for doing Nirooha Basti
Churnas		
4.	Vaishwanara churna	Chief ingredient is Haritaki and this combination is explained as Agni itself
5.	Vara churna	Also known as Triphala churna. This combination is explained as Medohara and Rasayana
Kalka		
6.	Madanaphala	Used as an ingredient of Niroohabasti
7.	Satapushpa	Used as an ingredient of Niroohabasti
Tailas		
8.	Sarshapa taila	This is a plain oil extracted from mustard seeds.
9.	Dhanwantaram taila	This is a prepared medicine explained in Sootika paricharya. This oil has got internal as well as external application.
10.	Gandharvahastai eranda taila	This a special preparation in castor oil medium by using the ingredients of Gandharvahastadi kwatha
11.	Pippaliadi taila	This oil is explained in the context of Arshas for doing Anuvasna
12.	Mahanarayana taila	This oil has got both internal as well as external application.Vandhyatwa comes as an important indication.
Kshara		
13.	Kaliana kshara	This is a combination indicated in the context of Arshas
Bhasma		
14.	Annabhedi sindura	This is a Bhasma preparation made up of Kasisa as a raw material.

She delivered a female baby on 8/3/2020 through LSCS. Each andevery phase of the management were monitored and recorded carefully. Through the Ayurvedic interventions it took a total of 8 months to get the positive result (as the initial visit of the patient in OP was on 11/10/2018). While she conceived, her date of LMP was 22/06/2019. The successful outcome in the present case signifies the relevance of logical selection of medicines according to the stage, judicious combination of internal medicines, procedures, diet and regimen for the complete cure of the disease.

8. Conclusion

This case report shows an insight into systematic learning how to manage primary infertility associated with PCOS effectively through Ayurvedic treatment modalities. The result obtained in this single case study is encouraging and the protocol followed here may be subjected for trial in larger samples.

Informed consent

Written consent was obtained from the couple for the purpose of publication of their clinical details.

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Conflict of Interest

None declared.

Author contributions

M.A. Asmabi was the physician responsible for the assessment, treatment plan and interaction with the patient.

M..K. Jithesh contributed in data analysis, interpretation, discussion and drafting of the case report.

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