



AYURVEDIC MANAGEMENT OF FEMALE INFERTILITY DUE TO POLY CYSTIC OVARIAN SYNDROME - A CASE REPORT

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Abstract- Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. Many factors are responsible for infertility, Poly cystic ovarian syndrome is one of them. The treatment available in current era of medicine is not satisfactory. Here we are presenting a case of Infertility caused due to Poly cystic ovarian syndrome which was treated with a combination of *Panchkarma* procedures. *Virechana karma*(purgation) was done After the *Deepan* and *Pachana* with *Panchkole* in dose of 3gm twice a day with luke warm water for 3 days followed by *Snehpana* in increasing dose according to *Koshtha*, *Agni* and *Bala* for 7 days till *Samyak lakshana* observed followed by 3 days *Abhyanga* and *Swedana* with *Dashmoola taila*, with *Tilvaka ghrta* in dose of 40mg according to *Koshtha*, *Agni* and *Bala* of the patients followed by *Erandmooladi yoga basti* for 8 days (firstly 1 *Anuvasan basti* with *Bala taila* (60 ml) followed by 3 *Anuvasana* and on 3 *Niruha basti* (with honey-100ml , *Saindhav lavan* -3gm, *Tila taila* -100ml, *Shatpushpa Kalk* -50ml, *Erandmooladi kwath*- 200ml , *Gomutra* -50ml, total 500 ml) alternatively lastly one *Anuvasana Basti* after diet regime (5 days) *Vandhyatva* was considered as the *Ayurvedic* diagnosis for the case. The case study demonstrate that patient conceived with a month of *Ayurvedic* treatment.

Keywords - *Ayurveda*, Infertility, *Panchkarma*, Poly cystic ovarian syndrome, *Vandhyatva*

Introduction -Infertility implies apparent failures of a couple to conceive, while sterility indicates absolute inability to conceive, for one or more reasons. If a couple fails to achieve pregnancy after one year of unprotected and regular intercourse¹. Female responsible 40-50% for infertility. According to the WHO report about 2-10 % of couples worldwide are unable to conceive primarily & about 60-80% couples in the world are infertile. It is estimated that 10% of normally fertile couples fails to conceive within their first year of attempt. Further 10-25% couples experience secondary infertility. Eighty per cent of the couples achieve conception if they so desire, within one year of having regular intercourse with adequate frequency (4-5times a week). Another ten per cent will achieve the objective by the end of second year. As such, ten per cent remain infertile by the end of second year.² Many essential factors are responsible for fertility. Many factors are responsible for female infertility as Ovulatory dysfunction -30-40%, Tubal Disease-25-35%, Uterine factors-10%, Cervical factors-5%, Pelvic endometriosis-1-10%, Unexplained-15%.³ Poly cystic ovarian syndrome (PCOS) is an ovulatory factor. It is the most common endocrine disorder in a woman of reproductive age. PCOS is a multifactorial and polygenic condition. Syndrome manifested by amenorrhea or oligomenorrhea, hirsutism, obesity associated with enlarged polycystic ovaries, increased ovarian volume $\geq 10\text{cm}^3$ and increased stroma. Polycystic ovary may be seen in about 20% of normal women. Incidence varies between 0.5- 4% more common amongst infertile women. It is prevalent in young reproductive age group 20-30%⁴. The treatment of infertility due to PCOS is mainly done by Hormonal treatment as combined oral contraceptive pills, Metformin (anti-diabetic), ovulation induction drugs, life style modifications (exercise) and by surgical treatment such as laparoscopic ovarian drilling (LOD), ovarian diathermy and pelvic laparoscopy, which are having their limitations and complications^{5,6}. So there is a need to develop an effective management in alternative medicines. In *Ayurveda* it can be correlate with the *Vandhyatva*. *Vandhyatva* is due to vitiated *Vata dosh*. Here we are representing a case of Female infertility caused due to PCOS which was successfully treated by *Ayurvedic* therapy with *Vandhyatva* as the *Ayurvedic* diagnosis.

Case report - A 37 years old female patient consulted in out- patient department of National institute of *Ayurveda*, Jaipur for infertility. She was married since 5 years. She never conceived before. Patient had complaints of irregular period with severe pain, clots, scanty bleeding, mild pain in vaginal region along with weight gain. Black marks were present around the neck. Patient had undergone treatment by many Gynaecologists in Jaipur but no positive response was observed in the patient.

Table No. 1– Time line

Years	Incidence
2012	Diagnosed infertility in Aditya hospital jaipur. Diagnosed PCOS. Scanty menses with foul smell.
2013-14	S.M.S. Hospital Jaipur Whites flacks with menstrual blood.
2016-17	Aditya hospital jaipur.
2017	Nims hospital jaipur. Pain in abdomen, indigestion, disturbed liver function test.
22/10/2017	Came in OPD of National institute of <i>Ayurveda</i> . <i>Deepan pachana</i> had given.
24/10/ 2017	Admitted in National institute of <i>Ayurveda</i> .
25/10/2017	<i>Snehapana</i> for 7 days
1-4/11/ 2017	<i>Abhyanga</i> and <i>Swedana</i> for 4 days had given.
4/11/2017	<i>Virechana karma</i> had given
4/11/ 2017	Special diet regime had given for 5 days.
9/11/2017	<i>Erandmooladi yoga basti</i> had given for 8 days.
18/11/ 2017	Patient had discharged.
20/12/2017	She had conceived.

Case findings - The patient attended *Panchakarma* department of National institute of *Ayurveda*, Jaipur on 22 October 2017 for the treatment. She was anxious for child. Her regular unprotected active married life was 5 years and Last menstrual period date -16 October 2017. Menstrual history- interval 45-50 days, duration 2 days, 2 pads per day, clots along with foul smell. Investigations of her partner were normal. In her family history no one had any systemic disorder and infertility history. Excessive hair growth over face, appetite was moderate, tongue was coated, bowel and bladder habits were normal. On physical examination, Patient was obese had the weight of 67 kg with increased abdominal circumference 40 cm, blood pressure of patient was 120/80mmHg, Pulse was 74/min and often irregular. Tenderness and any lump absent on palpation of abdomen. On

examination per vagina tenderness and any ulceration were absent, fornix was normal. Vagina was nulliparous. Discharge from vagina was normal in characteristics within physiological limit. Patient had *Vatapittaja prakrati* (constitution), *Vatajkaphaja Vikriti* (disorder), *Madhyam aahar sakti* (Food activity and digestive power), *Madhyam vyayama shakti* (Capability of physical strength). Biochemical investigations, Hb was 13gm%, ESR, Cholesterol and SGOT was slightly raised, LH was 19.8Miu/ML, FSH was 21.23 Miu/ml, SPRL-13.83ng/ml, Testosterone was 10.93ng/dl, Anti mullerian hormone was 7.29ng/ml, Prolactin serum was 9.24ng/ml, Thyroid profile was normal. The ultrasound (pelvis) done on 16 -10-2017. Uterus is heterogenous, myometrium is heterogenous with few intramural fibroids, endometrium is normal, few nabothian cyst are seen in cervix, multiple small size follicle with increased stromal echogenicity with 11.5cc volume in right ovary, multiple small size follicle with increased stromal echogenicity with 16.2cc volume in left ovary. Minimal free fluid is seen in cul de sac and Laparoscopy. HSG study was normal and both tubes were patent. Semen analysis report of her male partner revealed that total sperm count was-70 million/ejaculation and active motility was-75%.

Diagnostic focus and assessment -

Diagnosis of PCOS is done by laboratory tests such as Hormonal study (serum FSH, LH, Testosterone, Prolactin), Thyroid profile, Lipid profile and non-laboratory tests such as ultrasound (pelvis). Diagnosis is based upon the presence of any two of the following three criteria (American society for reproductive medicine (ASRM)/European society of human reproduction and embryology (ESHRE), 2003. 1. Oligo and /or Anovulation 2. Hyperandrogenism (clinical and/or biochemical) 3. Polycystic ovaries. Other etiologies as congenital adrenal hyperplasia (CAH), the thyroid dysfunction, hyperprolactinemia, cushing syndrome) are to be excluded with USG, hormone analysis⁷. In this patient was present, ovaries were enlarged. Ovarian volume was $\geq 10\text{cm}^3$ Stroma was increased. In this patient multiple follicle cysts were more than 12 measuring about 2-9 mm in diameter are crowded around the cortex which confirmed the diagnosis of polycystic ovarian syndrome.

Treatment plan – PCOS considered as *Artavakshaya* (Oligomenorrhoea) therefore *Samshodhan*⁸ (\sim detoxification) in form of *Snighdha* and *Mridu virechana* (Purgation) was planned for the case. *Vandhyatva* is considered as *Vataja yonivyapada*⁹ (\sim various gynaecological disorders) so general line of management of *Vataja yonipyapad* is *Vata -vyadhihar chikitsa*¹⁰ were adopted for the patient.

Intervention plan [Table -2] - Various *Panchkarma* interventions were adopted to treat this patient. *Deepan* and *Pachana* (increase the digestive power) were done with *Panchkola churna*¹¹ in dose of 3 gm with luke warm water twice for three days before beginning of *Panchkarma* intervention to the patient. From next 7 days *Snehpana* (internal application of medicated Ghee) with *Kashmaryadi ghrita*¹² in ascending order followed by *Abhyanga* (external application of oil) and *Swedana* (sudation) for 3 days were adopted. Next morning *Snighdha virechana* (purgation by medication) by *Tilvaka*¹³ *Ghrita* in a dose of 40 gm after *Abhyanga* and *Swedana* was administered. The *Samsarjan karma* (diet regime) was prescribed for 5 days for *Madhyam suddhi* (medium detoxification), on calculating 20 *Vega*. The *Erandmooladi yoga basti*¹⁴ for 8 days (firstly 1 *Anuvasan basti* with *Bala taila* (60 ml) followed by 3 *Anuvasana* and on 3 *Niruha basti* (with honey-100ml, *Saindhav lavan* - 3gm, *Tila taila* -100ml, *Shatpushpa Kalk* -50ml, *Erandmooladi kwath*- 200ml, *Gomutra* -50ml, total 500 ml) alternatively lastly one *Anuvasana Basti* after resuming normal diet for 5 days.

TABLE.2 Panchkarma procedures

Panch karma procedure	Drugs	Method of preparation	Method of application	Day of treatment
Virechana	<i>Snehpana with Kasmmaryadi Ghrita-Gambhari</i> (Gmelina arborea Roxb), <i>Haitaki</i> (Terminalia Chebula Retz), <i>Vibhitaki</i> (Terminalia bellirica Roxb), <i>Amalaki</i> (Emblica officinalis Gaertn), <i>Draksha</i> (Vitis vinifera Linn), <i>Kasmarda</i> (Cassia occidentalis), <i>Purushak</i> (Grewia asiatica Linn inn), <i>Punarnava</i> (Boerhavia diffusa Linn), <i>Haridra</i> (Curcuma longa Linn), <i>Daruharidra</i> (Berberis aristata DC), <i>Kaknaasa</i> (Asclepia scurassavica Linn), <i>Sahachar</i> (Barleria prionitis Linn), <i>Shatavari</i> (Asparagus racemosus Willd.), <i>Guduchi</i> (Tinospora cardifolia), <i>Goghrita</i> <i>Virechana with Tilvak Ghrita-Haritaki</i> (Terminalia chebula Retz), <i>Vibhitaki</i> (Terminalia bellirica Roxb), <i>Amalaki</i> (Emblica officinalis Gaertn), <i>Lodhra</i> (Symplocos recemosa), <i>kampillaka</i> (Mallotus		<i>Snehpana</i> done in ascending order (40, 60, 80, 110 130, 150, 170ml) for 7 days followed by Massage with <i>Dashmool</i> oil was done over whole body for 15 minutes followed by <i>Swedana</i> for 5 minutes for 3 days after that next morning <i>Abhyang</i> <i>Swedana</i> done followed by	14 days

	philippensis), <i>Vidanga</i> (Embelia ribes), <i>Kankustha</i> (Garcinia morella), <i>Kalmegha</i> (Andrographis paniculata), <i>Danti</i> (Baliospermum montanum), <i>Nishotha</i> (Operculina turpethum), <i>Snuhiksheer</i> (Euphorbia neriifolia), <i>Dadhi</i>		<i>Tilvak Ghrita</i> given in the dose of 40 gm and advised to take with luke warm water.
<i>Erandmooladi yoga basti</i>	<i>Erand</i> (Ricinus communis linn), <i>Palash</i> (Butea monospema), <i>Shalparni</i> (Desmodium gengeticum DC), <i>Prishnaparni</i> (Uraria picta), <i>Brahati</i> (Solanum indicum linn), <i>Kantkari</i> (Solanum xanthocarpum), <i>Gokhsur</i> (Tribulus terrestris), <i>Rashna</i> (Pluchea lanceolata), <i>Ashwagandha</i> (Withania somnifera), <i>Guduchi</i> (Tinospora cardifolia), <i>Atibala</i> (Abutilon indicum), <i>Punarnava</i> (Boerhavia diffusa Linn), <i>Aragwadha</i> (Cassia fistula), <i>Devdaru</i> (Cedrus deodara), <i>Madanphala</i> (Randia dumetorum), <i>Shatpushpa</i> (Anethum sowa), <i>Haphusa</i> (Juniperus communis), <i>Priyangu</i> (Calycarpa macrophylla), <i>Pippali</i> (Piper longum), <i>Madhuka</i> (Glycyrrhiza glabra), <i>Bala taila</i> - <i>Sarivan</i> (Uraria picta), <i>Ksheer Vidari</i> (Pueraria tuberosa), <i>Jivanti</i> (Leptadenia reticulata), <i>Shatavari</i> (Asparagus racemosus), <i>Mundi</i> (Sphaeranthus indicus), <i>Pippli</i> (Piper longum), <i>Kaknaasa</i> (Asclepi ascurassavica), <i>Pillu</i> (Salvadora persica), <i>Mung</i> (Vigna radiata), <i>Urad</i> (Vigna mungo), <i>Sharkra</i>	100 gm honey and 3 gm <i>Saindhav</i> salt mix properly then 100 ml luke warm <i>Bala taila</i> added and entire mixture stirred. 50 gm <i>Shatpushpa kalka</i> (Anethum sowa) added in this mixture followed by 200 ml processed with decoction of <i>Erandmooladi kwath</i> added. <i>Gomutra</i> (50ml) was also added.	After <i>Abhyang</i> and <i>Swedana</i> over local area <i>Basti</i> was given before the meal.
<i>Anuvasan basti</i>		Luke Warm <i>Bala taila</i> (60ml) and added pinch of <i>Sandhav lavan</i>	<i>Basti</i> was given for 8 day. <i>Anuvasan basti</i> (enema with medicate oil) was done followed by alternate <i>Anuvasan</i> and <i>Niruha</i> (enema with decoction <i>Basti</i>)

Result – Assessments of pregnancy were done by Urine pregnancy test. Urine pregnancy test was positive which was done on 20-12-2017.

Discussion – This case study is important one as this shows resolve case of female infertility with *Panchakarma* intervention. There was no need to use any oral medication or surgical intervention for this case. Exact pathology of PCOS is not clearly understood. It may be due to hypothalamic – pituitary compartment abnormality, androgen excess and hirsutism, anovulation, obesity and insulin resistance¹⁵. Anovulation considers as the *Artavakshya*¹⁶ in *Ayurveda* and *Vandhya* is considered as

Vataj yonivyavada. Charak mention that *Vata* is prominent in *Yonidosha*¹⁷. Vitiated *Vata dosha* causes *Srotoavrodha* (obstruction at micro channels level) and also vitiates *Kaph dosha*¹⁸, causes *Sthaulya*¹⁹ (Obesity) which is also symptom of PCOS. Here we used general treatment of *Yonivyavada* (gynaecological disorder), *Vatavyadi* (disorder due to vitiation *Vata dosha*) and *Artavkshya* (oligomenorrhea). General line of management of *Vataja yonipyapad* is *Vata vyadhihar chikitsa*. *Mridu* (low potency) and *Sneha yukta virechana* is the management of *Vatavyadhi*²⁰ and *Basti* (drug administration through anus) is the best *chikitsa* of *Vata*²¹. *Beeja* (~ovum, sperm) activity enhance by *Virechana*²² and *Shrotoavrodha* (~obstruction in micro channels) clear and purified the *Dhatu*. Here we adopted *Snighdha* and *Mridu virechana*²³ in form of *Tilvak ghrita*²⁴ *Kashmaryadi ghrita* used in *Snehpana* (internal application) mention in *Vataj yonivyapada* having *Vatashamaka* (Pacify the *Vata Dosha*), *Balya* (muscle strength) drugs and *Garbhprad* (helping fruit of conception). *Bala taila* used for *Anuvasan basti*. It has *Jivaniya* (vitalizing drugs), *Balya* (anabolic, provide strength) and *Vatashamaka* (pacify the *Vata dosha*) drugs, it also *Garbhprada*²⁵ (helping fruit of conception) Majority of the drugs in *Kashmaryadi ghrita* and *Bala taila* are *Madhur* (sweet), *Tikta* (bitter) and *Kashaya* (astringent) *rasa pradhan*, *Ushna veerya* (hot potency), *Madhur vipaak* (sweet), *Laghu* (light) and *Ruksha* (dry) *guna pradhanya*. *Kashaya* and *Madhur rasa*, *Sheet veerya* (cold potency) may increase the muscular strength of reproductive system. Majority of the drugs having *Tridoshashamaka* (pacify all three *Dosha*), *Deepana*, *Pachana* (increase digestive power), *Anuloman* (carminative), *Vrishya*, *Rasayana* (vitals), *Shothhar* (reduced inflammation), *Balya* (strength), *Yonidosha*hara (disorder of vagina), *Garbhasthapaka* (help in implantation) properties. *Erandmooladi basti* used in *Kaphaavruta Vata* (obstruction of *Vata* due to *Kapha dosha*) so it helps to remove obstruction and normalise the vitiates *Vata dosha*²⁶.

Conclusion - The case report explores the treatment of female Infertility with *Panchakarma* interventions.

Consent – Written informed consent was taken from the patient for procedures and article publications.

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