



Case Study

AYURVEDIC MANAGEMENT OF RECURRENT PREGNANCY LOSS DUE TO DIMINISHED OVARIAN RESERVE- A CASE REPORT

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ABSTRACT

The problem of infertility is increasing day by day due to current scenario of fast stressful and imbalanced life style. Infertility is defined as the failure to conceive after one year of regular unprotected coitus. Conception depends on the fertility potential of both the male and female partner. Ovulatory dysfunction, tubo-peritoneal factors, uterine factors, cervical and immunological factors, low ovarian reserve etc. contribute to female infertility or delayed conception. Ayurveda classics discussed the topic elaborately under the heading *Vandhyata* along with its *Nidana* (etiology), *Samprapthi* (etiopathogenesis), *Bheda* (types) and *Chikitsa* (treatments). According to Ayurveda infertility refers to the biological inability of a women of reproductive age group to conceive and unable to carry pregnancy to full term. Normal status of *Garbha sambhava samagri*, normal function of *Vata*, and *Soumanasya* are inevitable for *Garbhadharana*. This is a case report of 24year old female suffered from infertility due to recurrent pregnancy loss. Patient has hypothyroidism, diminished ovarian reserve and low AMH. Ayurveda IP and OP management including *Ama pachana*, *Agni deepana*, *Sodhana karma*, *Samana karma* etc., were adopted and patient conceived and delivered a healthy child. This article presented with recurrent pregnancy loss due to ovarian and uterine factors along with treatment approach in a view to explore for future research.

INTRODUCTION

Infertility is defined as the failure to conceive after one year of regular unprotected coitus [1]. About 80% of the couple achieves conception within one year of having regular intercourse with adequate frequency. Conception depends on the fertility potential of both the male and female partner. For pregnancy to occur ovulation, ovum transportation by the tube, presence of normal sperms, fertilization and implantation are essential. Among etiology of infertility male factor contribute to 30%, female factor contribute to 40-55%, both male and female factor contribute to 10-20%, and 15% are comes under unexplained infertility[2].

The cause of female infertility include ovarian factors, tubal factors, age related factors, uterine problems, endometriosis etc. Ovulatory disorder is one of the most common reasons of female infertility. The problem of infertility is fairly common nowadays and it has become need of the hour to find out solution which is having less complication and affordable.

According to Ayurveda, infertility refers to the biological inability of a women of reproductive age group to conceive and unable to carry pregnancy to full term. That is failure to achieve a child rather than pregnancy as *Garbha srava* (abortion) and *Mruthavatsa* (stillbirth) are also included in the types of infertility[3]. *Rithu* (fertile period), *Kshetra* (reproductive organs), *Ambu* (nutritive fluids) *Bija* (sperm and ovum) are considered as *Garbhasambhava samagri* (essential factors of conception)[4]. In addition healthy psychological status and normal functioning of *Vata* are essential. Infertility management in Ayurveda focused on the establishment of proper functioning of all these.

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Recurrent pregnancy loss is defined as two or more spontaneous miscarriage before the fetus reach viability. Etiology includes genetic causes, congenital and acquired anatomical abnormalities of reproductive tract, Poly Cystic Ovarian Disease (PCOD), Diminishing Ovarian Reserve (DOR), thyroid dysfunctions, immunological causes, infections etc. Among them Diminishing Ovarian Reserve (DOR) is a complex phenomenon and exact mechanism of development of DOR is unknown. This is an important limiting factor for the success of any treatment modality for infertility. In DOR functional reproductive potential is reduced due to reduction in oocyte quality and quantity. Diminished ovarian reserve is a phenomenon often noted in women in their mild to late thirties, but it may affect younger women as well. There is accelerated decline in follicular pool above 35 years and this phenomenon is accompanied by declining quality due to aging oocyte. Hence younger women with DOR may have better chance at conception, but with high risk of pregnancy loss^[5]. Ayurveda concept include both *Bija roopa artava* (quality of ovum) and *Dhatu rupa artava* (hormonal function) *Dushti* which leading to recurrent pregnancy loss and it can be taken as *Garbhasravi vandhya*.

Case Report

A 24 year old female presented to the OPD of Dept. of PTSR, GAVC TVM with complaint of inability to beget a viable child even after 3 years of unprotected sexual life. The patient attained menarche at the age of 13 years and she had regular cycles. She got married at the age of 22 to man of 32 years. It was a non-consanguineous marriage. She conceived naturally within one year (Sep 2017). But medical termination

did at 8th week because of absence of fetal cardiac activity. After 6 months (April 2018) she conceived again but was diagnosed as ectopic pregnancy and had spontaneous abortion. Then she consulted an infertility clinic and on detailed evaluation she was diagnosed with Diminished Ovarian Reserve (DOR). They advised Ayurveda treatment and got admitted in our hospital. She underwent one course IP management and conceived in April 2019 but had a spontaneous abortion. After that patient developed severe pain and stiffness over both leg and emotional disturbances. She had admitted here for next course IP management.

On detailed assessment her menstrual cycle was regular with interval of 26 to 30 days. Duration of bleeding was 3 to 4 days with moderate dysmenorrhea on day 1. She had occasional mucous white discharge per vagina with mild itching especially before the onset of cycles. Obstetrical history shows A3P0. She had no dyspareunia and aware about fertile period. Past history reveals hypothyroidism and she was under Thyronorm 125mcg for last five years. On general examination the patient was obese with moderate work style, mixed diet with preference to spicy hot food. Psychological status was depressed with sleep disturbances. On per vaginal examination external genitalia were normal without any anatomical defect. No discharge seen externally. Per-speculum examination shows mild cervical erosion and white mucous discharge from vaginal walls. On investigations her AMH was 1.1ng/ml. USG pelvis shows normal uterus and adnexa. Follicular study shows an AFC count of 3 on right and 2 on left ovary.

Roga Rogi Pareeksha

<i>Dosha</i>	<i>Vata, Pitta, Kapha</i>
<i>Dooshya</i>	<i>Rasa, Rakta, Artava, Mamsa, Medas</i>
<i>Srotas</i>	<i>Rasam, Rakta, Mamsa, Artava, Medas</i>
<i>Deha desa</i>	<i>Garbhasaya</i>
<i>Rogi bala</i>	<i>Madhyama</i>
<i>Roga bala</i>	<i>Pravara</i>
<i>Vyadhi avasta</i>	<i>Purana</i>
<i>Anala</i>	<i>Madhyama</i>
<i>Satmya</i>	<i>Madhyama</i>
<i>Abhyavaharana Sakti</i>	<i>Madhyama</i>
<i>Jarana Sakti</i>	<i>Madhyama</i>
<i>Prakruti</i>	<i>Kapha pitta</i>
<i>Vaya</i>	<i>Madhyama</i>
<i>Satwa</i>	<i>Avara</i>

Diagnosis: *Garbhasravi Vandhya*

Internal Medicines in First Course Treatment

S. No	Internal medicines	Dose
1.	<i>Sapthasaram kashaya</i>	90ml twice daily before food
2.	<i>Maharasnadi kashaya</i>	90ml twice daily before food
3.	<i>Phalasarpi</i>	10gm bed time

Procedure Done in First Course of Treatment

Sl. No	Procedure	Medicine	Duration
1.	<i>Udwarthana</i>	<i>Kolakulathadi choorna</i>	14 days
2.	<i>Yoni kshalana</i>	<i>Triphala kashaya</i>	7 days
3.	<i>Virechana</i>	<i>Gandharva eranda 20ml</i>	3 Vegas
4.	<i>Snehapana</i>	<i>Pippalyadi anuvasana taila</i>	For 7 days (30ml, 60ml, 90ml, 100ml, 125ml, 150ml, 175ml)
5.	<i>Abhyanga and Ooshma sweda</i>	<i>Sudha bala taila</i>	For 1 day
6.	<i>Utklesana</i>		1 days
7.	<i>Vamana</i>		<i>Pravara vega 6</i>
8.	<i>Samsarjana karma</i>		5 days
9.	<i>Vicharana sneha pana</i>	<i>Pippalyadi anuvasana taila</i>	For 3 days 20 ml twice daily before food
10.	<i>Abhyanga and Ooshma sweda</i>	<i>Karpooradi taila</i>	3 days
11.	<i>Virechana</i>	<i>Gandharva eranda</i>	5 Vegas
12.	<i>Choorna pinda sweda</i>	<i>Kolakulathadi choornam</i>	For 7 days
13.	<i>Mustadi raja yapana vasti</i>	<i>Sneha vasti with Pippalyadi anuvasana taila</i> <i>Kashia vasti</i>	D1, D2, D4, D6, D8 D3, D5, D7
14.	<i>Uttara vasti</i>	<i>Maha kalyanaka ghrita</i>	For 5 days

Discharge Medicine

1. *Sukumara ghrita* 10gm, twice daily before food
2. *Misi choornam* 5gm with *Grita*

Patient conceived within 2 months but spontaneous abortion occurred in 7th week. *Ama garbha srava* followed by emotional imbalance of patient cause *Sareerika* and *Manasika dosha dushti*. *Dosha samanwaya* with *Ama* cause *Srotho rodha* and *Avarana*. The vitiated *Doshas* get lodged on *Garbhasaya* and *Adhakaya*. She developed severe pain and stiffness over legs, general weakness and indigestion. Second course of treatment begins with focus on *Urusthambha* and *Sopha chikitsa*. After *Rookshana*, *Ama pachana* and *Agni deepana sodhana karma* were done.

Internal medicines in second course of treatment

S. No	Medicines	Dose
1.	<i>Vaiswanara choorna</i>	5gm. twice daily before food
2.	<i>Gudoochi and Punarnava toyam</i>	frequently
3.	<i>Amrithotharam kashaya</i>	90ml twice daily before food
4.	<i>Varanadi kashaya</i>	90ml twice daily before food
5.	<i>Gokshura punarnavadi gulika</i>	1 tab with <i>Kashaya</i>
6.	<i>Gudardraka</i>	5gm twice daily after food
7.	<i>Sapthasaram kashaya</i>	90ml twice daily before food
8.	<i>Sukumara grita</i>	1 tsp bed time
9.	<i>Abhayarishta</i>	20ml twice daily after food

Procedures in 2nd course of treatment

S. No	Procedure	Medicine	Duration
1.	<i>Choorna pinda sweda</i>	<i>Kolakulathadi choornam</i>	For 7 days
2.	<i>Virechana</i>	20ml <i>Gandharva eranda</i>	Total 5 Vegas
3.	<i>Snehapana</i>	<i>Kalyanaka grita</i>	For 7 days (30ml, 60ml, 90ml, 120ml, 150ml, 160ml, 175ml)
4.	<i>Abhyanga and Ooshma sweda</i>	<i>Satahwadi taila</i>	For 3 days
5.	<i>Virechana</i>	<i>Gandharva eranda</i>	Total 4 Vegas
6.	<i>Yoga vasti</i>	<i>Sneha vasti - Maha Masha taila</i> (120ml) <i>Kashiavasti-Gandharva hastadi kashaya</i>	D1, D2, D4, D6, D8 D3, D5, D7
7.	<i>Uttara vasti</i>	<i>Maha kalyanaka grita</i>	For 5 days

Discharge Medicines

1. *Sukumara grita* 10gm, twice daily before food
2. *Pippali choornam* 3gm with *Grita*

Follow up treatment

Patient was admitted and given two courses of *Mustadi raja yapana vasti*.

RESULTS

Follow up and outcome: She got conceived after 4 months of treatment. Antenatal period was uneventful and she was administered with *Masanumasika ksheera kashayas*. She delivered a female baby through LSCS on 26/12/2020. Birth weight was 4.1kg and baby cried immediate after birth.

DISCUSSION

Ayurveda gives elaborative description of female infertility by the name of *Vandhyata*. It is mentioned as an independent disease and as an *Upadrava* of many *Yoni rogas*. As per Ayurveda, vitiation of *Artavavaha srotas* is the principle cause of *Vandhyata*^[6]. Acharya Chakrapani clearly mentioned that *Sukra* (semen) is not received by a diseased *Yoni* and thus fertilization is hampered. Even if fertilization takes place implantation is hampered, hence viable pregnancy does not take place^[7]. Acharya Charaka has mentioned *Vandhyata* as the result of *Pradushta garbhasaya bija bhaga* of *sonita*^[8]. Acharya Susruta has mentioned *Vandhya* as *Nashtartava*^[9]. Acharya Hareeta considered Recurrent Pregnancy Loss (RPL) as *Garbhasravi vandhya*^[10]. Acharya Susruta, Charaka and Vagbhata included the condition among *Vimsathi yoni rogas* (20 gynecological disorders). Acharyas Susruta and Charaka mentioned the condition as *Putragni*^[11,12] and Acharya Vagbhata mentioned as *Jathagni*^[13]. *Vamini yoni vyapat* mentioned by Acharya Vagbhata can be taken as implantation failure and patient report with infertility^[14]. *Asrija/Apraja yoni vyapat* is mentioned by Acharya Charaka where excessive bleeding per vagina occur even after conception^[15]. *Durdhara jathaharini*^[16] and *Vasya jathaharini*^[17] mentioned by Acharya Kasyapa can be taken as first trimester and second trimester abortions. These are

few context in our classics mentioned about infertility and recurrent pregnancy loss.

According to Ayurveda basic etiology of all disease is *Mandagni*^[18]. Here *Agni* is affected due to irregular diet habit, lack of exercise, imbalanced use of *Shad rasas* etc. Due to *Agni dushti Ahara rasa* undergo improper *Dhatu parinama* and formation of *Ama* will occur. *Ama anwaya* (combined) with *Tridoshas* lead to *Sama doshas* and normal physiology got distorted. These lead to improper formation *Artava/sukra dhathu*. *Amatwa* and *Agni mandya* will in turn cause *Kapha dosha kopa* and channels of the body get blocked. These vitiated *Doshas* got *Sthana samsraya* in *Garbhasaya* and *Artavavaha srotas* and cause repeated pregnancy loss. It can be taken as imbalance of Hypothalamo pituitary ovarian axis and entire reproductive physiology got distorted. Here *Kshetra dushti* is due to chronic endometritis followed by recurrent pregnancy loss. The inflammatory condition of endometrium will alter the endometrium and it became hostile for implantation. Even implantation takes place chance of spontaneous abortion is high due to improper placental blood formation. Here the factors contributing *Vandhyata* include *Bija roopa artava dushti*, *Dhatu roopa artava dushti* and *Garbhasaya dushti*. Treatment focused on *Amapachana*, *Agni deepana*, *Vata anulomana*, *Kapha samana* and *Mano anulomana*. Management includes *Sodhana karma*, *Stanika karma*, *Samana karma* and psychological support. *Sodhana* regulate and restore the normal physiological function of body and reproductive system. *Stanika chikitsa* restore healthy state of *Yoni*, restore structural integrity and functional capacity of *Kshetra*. Only in healthy *Yoni*, conception

occur as a result of union of healthy gametes along with descent of *Jiva*^[19].

Udwarthana with *Kolakulathadi choornam* helps in *Kapha samana* and *Agni deepanam*^[20]. *Sneha pana* with *Pippalyadi anuvasana taila* is done as it is best for *Moodha vata anulomana* and *Taila* itself has the property of *Yoni marga visodhana*^[21]. *Vamana* alleviate *Kapha dosha* through *Urdhwa marga*. *Virechana* improves the quality of *Bija* (*bija karmukata*)^[22]. *Eranda moola* is the best drug of choice for *Vrishya* and *Vata hara*^[23]. So *Gandharva eranda taila* is used for *Virechana*. During first course treatment *Sneha vasti* was done with *Maha masha taila*. It is indicated in *Sukra dhatu kshay*^[24] and considering the principle *Nareem tailena mashaischa pittalai samupaacharet*^[25]. So it is administered prior to *Mustadi raja yapana vasti*. *Mustadi raja yapana vasti* is indicated for *Apaprajata nari* and it has the property of both *Kashaya vasti* and *Sneha vasti*^[26]. *Kalyanaka grita* is *Sreshtha* for *Pumsavana* (improves the quality of ovum), *Balya* and *Pushtya* (nourishing). It also helps to keep the psychological stability of the patient^[27]. As *Suomanasya* is the prime important factor for *Garbha dharana*^[28], *Kalyanaka grita* is an ideal choice in this condition. Second course of treatment, considering the *Ama avasta* of patient *Vaiswanara choornam*, *Amrithotharam kashaya* etc., are selected for *Rookshana*, *Ama pachana*, and *Agni deepana*. After *Ama nirharana* and *Agni deepana sodhana karma* were done. *Sukumara grita* and *Pippali choorna* were given as discharge medicines as *Sukumara grita* is *Balya*, *Rasayana*, *Vrishya*, *Deepana*, *Malanulomana* and *Garbhasaya sudhikara*^[29]. *Pippali choornam* is *Padhya* in *Yoni roga* and it has *Rasayana* property^[30].

CONCLUSION

The divine quality of women is her reproductive capacity. Now a day's infertility is a grave issue among couple. It has a negative impact not only on their reproductive health but also on their family social and psychological wellbeing. Ayurvedic management of infertility is found to be very effective in diminished ovarian reserve, recurrent pregnancy loss, PCOD and associated complications. Ayurveda provide a non-invasive, low cost therapeutic protocol and they tend to improve the systemic health and wellbeing of the individual. It is the responsibility of Ayurveda community to make aware of couple to choose Ayurveda not only as a first therapeutic choice of infertility but also for preconception care.

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