

**SUCCESSFUL AYURVEDIC MANAGEMENT OF PRIMARY INFERTILITY WITH
MULTIPLE FAILURES OF IVF- A CASE REPORT**

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ABSTRACT

Infertility is a major health issue found worldwide. Apart from Assisted Reproductive Technologies (ART), Intrauterine inseminations (IUI), Ovarian stimulation etc techniques are applied to treat Infertility, which has improved the success rate of fertility in infertile couples. But still large numbers of couples are deprived of successful pregnancy outcome due to repeated failures, in spite of using various techniques as mentioned above. Here role of Ayurved is very crucial but still people are unaware that, Ayurved can improve the success rate to a great extent. **Case report:** This 36 year old female, married 8 years back was a case of Primary infertility. Gynaecologist tried Intrauterine insemination for 3 times, IVF (including embryo transfer) for 9 times, repeatedly failed during 5 years of rigorous attempts. She was finally informed of some immunological cause of her Primary infertility. Finally she was referred to Ayurved. She was treated by sound Ayurved principles including Panchakarma i.e. Vaman followed by a course of Yoga basti and Tiktakshir basti for 2 weeks. Within 3 months of Panchakarma treatment, she conceived and delivered in third trimester, as a normal delivery. **Conclusion:** This case report is the testimony of Ayurved of its inherent strength in treating infertility cases. This case report is the ray of hope to thousands of multiple failure cases of ART, sounding them that Ayurved may be the final answer to their infertility.

KEYWORDS: Primary infertility, Assisted Reproductive Technologies (ART), Intrauterine insemination (IUI), Ovarian stimulation, Ayurvedic management, Vandhyatva.

INTRODUCTION

Primary infertility is a serious health issue globally and its prevalence varies between 8-10% couples in reproductive age group.^[1] Among the couples suffering from Infertility worldwide, India contributes to 25% of them.^[2] There are certain risk factors contributing to Primary infertility and these are Delayed age at menarche >14 years, Delayed age at marriage, Obesity, Employed woman, Nuclear family, Higher educational level, Family history of infertility.^[3]

Assisted reproductive technologies (ART), as per American Centre for Disease Control (CDC) definition, are any fertility-related treatments in which eggs or embryos are manipulated. Procedures where only sperm are manipulated, such as intrauterine inseminations, are not considered under this definition. Additionally, procedures in which ovarian stimulation is performed without a plan for egg retrieval are also excluded from the definition.^[4]

The two most commonly used procedures to facilitate couples needing fertility assistance are

- By Intra Uterine Insemination (IUI), specially prepared sperms are placed directly in to the uterus at the time of ovulation that increases the chances of fertilization. Infertile couples often start treatment using IUI, which is much less invasive and natural. It is better suited to sexual dysfunction and other reasons like busy work or travel schedule.
- By In-vitro Fertilization (IVF), eggs are surgically removed from the ovaries, eggs and sperm are combined in laboratory and are fertilized. Fertilized eggs are cultured for few days to be mature enough for safe transfer to uterus.

IVF is recommended for couples having severe male infertility, Blocked Fallopian tubes, Failure of IUI procedure and concern about certain genetic disorders.^[5]

IVF is by far the most common ART procedure performed and includes associated techniques such as cryopreservation and Intracytoplasmic sperm injection (ICSI).^[6]

Success rates of IVF decline as age advances. The Society for Reproductive Technology (SART) had opined that for the women under 35, the percentage of live births via IVF is 55.6%. Live birth per first embryo transfer is 41.4%. With a later embryo transfer, the live births percentage is around 47%. It's also important to note that these statistics are all based on a woman using her own eggs.^[7] According to the Indian Express, the success rate of Assisted reproduction is around 35-40% and the take home baby rate per cycle varies between 20-30%. As per Dr. Seema Jain, cumulative pregnancy at the end of four attempts is between 60-70%.^[8]

CASE REPORT

This 36 year old female Gynaecologist, married 8 years ago was a case of Primary infertility. Both Fallopian tubes were patent. Rt sided ovary was normal. Lt sided ovary was small and rudimentary. Anti Mullerian Hormone level was low i.e. 0.25 ng/ml. Her husband was 39 years old, with Sperm count almost normal.

Semen exam. of husband:-Sperm count 42 million/ml, Motility-60% motile sperms at one hour; Abnormal forms and Dead sperms-40%.;Viscosity-Normal

She was desperate to have child and tried every possible measure like IUI 3 times, IVF-9 cycles but failed.

The details of her attempts of IUI and Assisted reproductive technologies (ART) are as follows:- Year 2017- IUI 3 times but failed.

Year 2018-2019 IVF started: 2 Cycles of IVF-Own egg failed; 3 Cycles of IVF-Donor egg were attempted in Kolhapur by donor egg-failed

Year 2019-- 1 cycle of IVF in Aurangabad was attempted with Donor egg- Failed

Year 2020-1 cycle of IVF in Nashik was attempted with own egg- Failed

Year 2021- 2 Cycles of IVF were attempted at Aurangabad-Failed; details as follows:

(1 IVF with Donor embryo was attempted at Dist. hospital, Aurangabad. Beta HCG level was 500 IU/L initially but soon declined. - Second IVF with Donor embryo was attempted at Dist. hospital, Aurangabad. Beta HCG level was 300 IU/L initially but again soon declined.)

Finally all eminent IVF specialists informed her that there was some immunological cause of Implantation failure that might be responsible for her Primary infertility. To treat the same, she was given Lymphocyte Immunization Therapy but that was also not successful. She was very nervous and almost lost hope of getting

successful pregnancy. She was advised to adopt a child, as the last resort. But her mother counselled her to approach Ayurved as a last option. She approached at Sarita's Punarnava Trimarma Chikitsalay and Research centre, Nanded on 8 July 2022.

This case was a real challenge and it was accepted due our strong faith on Ayurved.

History: She was married at the age of 28 years.

Menstrual history-4-5/28 days, Regular. No H/o Abortion or missed carriage; No evidence of infection of Toxoplasmosis, Rubella, Cytomegalovirus. Herpes simplex, Hepatitis B and Syphilis, No evidence of Polycystic Ovarian disease, Uterine fibroid, Uterine malformations, Diabetes, Hypertension.

No habit of Smoking or alcohol indulgence.

P/V exam- Uterus anteverted; anteflexed.

Laparoscopic examination revealed Right ovary as normal. Left ovary was small and rudimentary. Both fallopian tubes were patent.

All the attempts i.e. IUI-3 times, IVF 9 cycles proved to be a failure.

Hetu analysis:- Heavy duty, late night calls being a Gynaecologist & obstetrician, constant stress and strain, Eating habits of consuming fast food, Fermented foods like Idly, Dosa, Milk shakes of fruits, Consuming milk at bed time, Adhyashan etc.

On clinical examination: Afebrile. Pulse-74/min, Respiration-18/min. B.P- 118/78 mm Hg.

RS, CVS, P/A- Nothing abnormal detected.

Diagnosis: Primary Infertility with multiple I.V.F. failures.

Treatment

Nidan parivarjan:- She was advised to refrain from eating habits of consuming fast food, fermented foods like Idly, Dosa, milk shakes of fruits, consuming milk at bed time, Adhyashan etc. She was advised *Laghu* and *Supachya aahar*. She was asked to do Anapan meditation to reduce stress and strain.

Abhyantar Chikitsa

Tab Ovular (Divine pharmaceuticals) 1BD- 3 months;

Tab Div-Torch 1BD-3months

Tab Chandraprabhavati (Rasa-shala ,Pune) 1TDS-3 months

Tab Vrishya vati 1 BD- 3 months

Tab Yograj guggul 1 BD- 3 months

After this course of 3 months, she was advised *Vaman* panchkarma therapy which was preceded by a course of *Snehapan* for 3 days, *Abhyanga* one day prior and on the day of *Vaman* was accomplished. *Vaman* was carried on 13 October 2022. Later, a course of *Yogbasti* with Sarvang Snehana and Swedan for 7 days followed by a course of *Tiktakshir basti* with Sarvang Snehana and

Swedan for 7 days was executed from 3 Dec to 16 Dec 2022 (14 days).

On 3.12.2022, she was advised following treatment:-
 Tab Ovular (Divine pharmaceuticals) 1BD- 3 months;
 Tab Div-Torch 1BD-3months
 Tab Chandraprabhavati (Rasa-shala, Pune) 1TDS-3 months
 Tab Vrishya vati 1 BD- 3 months
 Aampachak kadha- 2 TSF TDS- 3 months
 Tab Shwa 1 BD- 3 months

She conceived within 3 months of Panchkarma treatment. She delivered a male child at the end 30 weeks of gestation, on 8th Oct 2023. The delivery was normal and post partum period was uneventful. Weight of the baby was 2.3 kg. Baby is fully normal without any congenital anomaly.

DISCUSSION

As per WHO, infertility is defined as the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse.^[9] In the present case, the couple waited for 2 years of active sexual life but there were no signs of conception. There was no male factor affected. Therefore the female went for intrauterine insemination for 3 times, which proved unsuccessful in bringing out conception. Then the female attempted 9 cycles of In-Vitro-Fertilization using her own egg or using donor embryo, but that too failed. The term "repeated IVF failure" refers to situations where there have been three or more unsuccessful attempts to conceive after using healthy embryos. It is a term that is used to describe both situations in which a woman is unable to become pregnant and those in which a pregnancy ends in an early miscarriage.^[10] There were two occasions of chemical pregnancy as Beta HCG level went up to 500 IU/L and 300 IU/L but soon declined.

A chemical pregnancy is a very early miscarriage that happens within the first five weeks of pregnancy. An embryo forms and may even embed in uterus lining (implantation), but then it stops developing.^[11] Chemical pregnancies occur quite frequently following IVF. It usually result from a chromosomally abnormal (aneuploid) embryo trying to implant, it can also be due to the uterine lining (for anatomical, immunologic or other reasons) being insufficiently receptive to allow healthy embryo implantation.^[12,13]

Immune infertility, in terms of reproductive failure, has become a serious health issue involving approximately 1 out of 5 couples at reproductive age. Semen, may sensitize the female genital tract. The immune rejection of male semen in the female reproductive tract is explained as the failure of natural tolerance leading to local and/or systemic immune response. Present active immune mechanism may induce high levels of anti-seminal/sperm antibodies. It has already been proven that iso-immunization is associated with infertility.^[14]

For treating this iso-immunization issue, the case was administered a course of Lymphocyte Immunization therapy (L.I.T.) in March 2021, which entails the procedure involving the transfer of white blood cells from the prospective father into the skin of the prospective mother. This is done to introduce the immune system of the husband so as to prepare the immune system of woman for her pregnancy.^[15] However it is revealed here that, this L.I.T. also failed to treat the primary infertility in the present case. Most of the IVF specialists informed the case that she may not ever conceive in future. She was informed that there was some immunological cause of Implantation failure that might be responsible for her Primary infertility.

Immunological cause as per Ayurved is due to toxins accumulated from unhealthy foods, unhealthy habits (Aahar/Vihar hetu), environmental pollutants, side effects of drugs and we may add factors like Anti-Sperm antibodies. Free radicals and Reactive Oxygen Species (R.O.S.) are unstable molecules as a by-product of cellular metabolism and when produced in large amount, it may cause extensive damage to various cells. Free radicals thus adversely alter lipids, proteins, and DNA and trigger a number of human diseases.^[16] *Aam* may be termed as the combination of free radical damaged physiochemical and cellular material, accumulated due to various internal and external toxic stimuli. Immunological cause of the primary infertility in the present case may be viewed as *Aam* related pathogenesis.

As per Ayurved, *Vandhyatwa* (Infertility) is *Rasa-dhatu-gat vikar*.

Charakacharya had mentioned that *Raja/ Aartav* and *Stanya* are *Updhatu* of *Rasa dhatu*. *Ras dhatu* and *Kapha* are inter related (*Ashrayaashreyee*). *Mala* of *Rasa dhatu* is *Kapha*. *Vaman* is the best remedy of *Rasa-dhatu-gat doshas*. Similarly, *Upadhatu* of *Rasa* became *Veeryavan due to Vaman-upachar*.

Vagbhat had mentioned

Tatrsthani sthito Vayuh Pittam tu Swed Raktayoh I
 Shleshma shesheshu I

Tennaisham Ashraya-ashrreeyenam Mithah II Ashtang
 Hriday Sutrasthan 11/26^[17]

Kapha is *Ashreyee* of not only *Rasa dhatu* but also of *Mauns*, *Meda*, *Majja* and *Shukra dhatu*. Similarly *Kapha* is also *Ashreyee* of *Purish* and *Mutra mala*. Therefore *Vamanopchar* treated *dosha* of *Rasa* and *Shukra dhatu* which is responsible to *Vandhyatwa* (Infertility).

Vamanopchar also digested *Ras-dhatu-gat Aam* leading to *Shodhana* of *Poshak dhatu*.

Here it is relevant to mention that the said immunological cause could not be removed by Immunotherapy but Ayurvedic treatment was successful

enough to remove the immunological cause or *Aam* related cause by *Nidan parivarjan*, *Deepan -Pachan* and *Shodan*(*Vaman and Yogbasti*) *chikitsa* of *Rasa* and *Shukra* dhatu.

Garbhashay (Uterus) is located in *Apan kshetra*. For management of *Vata-prakop*, we administered *Sarvang Snehana-Swedana*, *Yog-basti* -7 days and *Tiktakshir-basti*-7 days. Due to *Sarvang Snehana-Swedana* and *Shodhan* by *Yog-basti*, *Vata-shaman* and *Anuloman* was accomplished. It paved way for implantation of embryo in to Garbhashay.

As per Samhita, "Majja-Shukra Samutathanam Aushadham Swadu Tiktakam ".^[18]

The herbs included in preparation Tiktakshir (Kshirpak) were of Madhur and Tikta rasa; those have effect on Majja and Shukra-gat-dhatu vikaras. Therefore for improving nourishment of Shukra dhatu, we administered Tiktakshir-basti.

Div-TORCH contained herb Amrita (*Tinospora cordifolia*), Amalki (*Emblica officinalis*), Manjista (*Rubia cordifolia*), Anantmool (*Hemidesmus indicus*), Vala (*Vetiveria zizanioides*), Durva (*Cynodon dactylon*), Dhamasa (*Fagonia arabica*), Yastimadhu (*Glycyrrhiza glabra*), Haridra (*Curcuma longa*), Paripatha (*Fumaria indica*), Bhumyamalki (*Phyllanthus niruri*); Bhavna dravya:-Shatawari (*Asparagus racemosus*), Kalmegh (*Andrographis paniculata*), Haritaki (*Terminalia chebula*) and Haridra (*Curcuma longa*).



Figure 1: Vaman therapy



Figure 2: Photograph of precious child-Age 2 months

This formulation acted as Immunomodulator, Anti-oxidant, Hepatoprotective, Antibacterial, Antiviral and Anti-depressant and has been recommended in Habitual abortion, Congenital anomalies and Infertility.

Cap Ovular contains Chandraprabhavati, Pushpadhanwaras, Kubera ksh vati, Kantakari, Ulatkambale etc. It also contains Ashwagandha, Shatavari, Shiviling beej, Putrajeevak, Durva, Haritaki. Kutki. Yavkshar, Jatamansi and Bramhi. It corrects unovulatory cycles, produces ovulation and treats Infertility.

The present case has undergone IVF for number of times, which disturbed her hormonal balance and had increased *Ruksha-guna* in uterus. Therefore we advised her 'Shwa' (Shwa drastadi guggul) which contains *Aap Mahabhut-pradhan* dravya that reduced the *Rukshata* and established *Snigdhatata* in uterus.

Thus above prompt Ayurvedic treatment laid foundation for a successful outcome of pregnancy.

CONCLUSION

Ayurved has inherent strength and ability to treat Primary infertility. This case study highlighted the role of Ayurved to treat most complicated case of Primary infertility, where Modern science with all its modern techniques repeatedly failed in spite of rigorous attempts made for 5 long years to treat it. This case report is the ray of hope to thousands of multiple failure cases of ART, sounding them that Ayurved may be the final answer to their infertility.

REFERENCES

1. World Health Organization. *Programme on Maternal and Child Health and Family Planning, Division of Family Health*. Geneva: World Health Organization. Infertility: A Tabulation of Available Data on Prevalence of Primary and Secondary Infertility, 1991; 1–60. [Google Scholar]
2. World Health Organization. The World Health Report, 1996, WHO, Geneva, 1996; 12.
3. Ashwini Katole and Ajeet V Saoji. Prevalence of Primary Infertility and its Associated Risk Factors in Urban Population of Central India: A Community-Based Cross-Sectional Study. *Indian J Community Med.*, Oct-Dec, 2019; 44(4): 337–341. doi: 10.4103/ijcm.IJCM_7_19
4. Assisted Reproductive Technology (ART). <https://www.cdc.gov/art/whatis.html>
5. IUI vs IVF: Which is Right for you?

- [https://www.ncbi.nlm.nih.gov/healthbeat/healthy-tips/iui-vs-ivf-which-is-right-for-you#:~:text=Through%20intrauterine%20insemination%20\(IUI\)%2C,fertilized%20outside%20of%20the%20body](https://www.ncbi.nlm.nih.gov/healthbeat/healthy-tips/iui-vs-ivf-which-is-right-for-you#:~:text=Through%20intrauterine%20insemination%20(IUI)%2C,fertilized%20outside%20of%20the%20body)
6. Jain M, Singh M. Assisted Reproductive Technology (ART) Techniques. [Updated 2023 Jun 7]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK576409/>
 7. IVF success rate by Age. <https://www.elite-ivf.com/ivf-success-rates-by-age/#:~:text=IVF%20Success%20Rates%20Under%2035,births%20percentage%20is%20around%2047%25.>
 8. Infertility: A growing concern. <https://indianexpress.com/article/cities/pune/infertility-a-growing-concern/>
 9. Infertility. <https://www.who.int/news-room/fact-sheets/detail/infertility>
 10. Multiple IVF failures Reasons: What to do next?. <https://www.novaiivffertility.com/blog/multiple-ivf-failures#:~:text=The%20term%20%22repeated%20IVF%20failure,ends%20in%20an%20early%20miscarriage.>
 11. Chemical pregnancy. <https://my.clevelandclinic.org/health/diseases/22188-chemical-pregnancy>
 12. John Jude Kweku Annan, Anil Gudi, Priya Bhide, Amit Shah, and Roy Homburg. Biochemical Pregnancy During Assisted Conception: A Little Bit Pregnant. *J Clin Med Res.*, Aug. 2013; 5(4): 269–274.
 13. Sher G. *IVF Authority March 24, 2010; Online* [Google Scholar]
 14. Andrea Brazdova, Helene Senechal, Gabriel Peltre, and Pascal Poncet. Immune Aspects of Female Infertility. *Int J Fertil Steril*, Apr-Jun, 2016; 10(1): 1-10.
 15. Lymphocyte Immunization Therapy (L.I.T.)-ICPRM. <https://icprm.in/lit-therapy/#:~:text=The%20procedure%20involves%20the%20transfer,of%20the%20woman%20for%20pregnancy.>
 16. V. Lobo, A. Patil, A. Phatak, and N. Chandra. Free radicals, antioxidants and functional foods: Impact on human health. *Pharmacogn Rev.*, Jul-Dec, 2010; 4(8): 118–126.
 17. Vaidya D.P. Gadgil, Yashashri Joshi, Sachin Kulkarni. *Ashtang Hruday, Sutra-sthan, Chapter 11, verse 26; Mankarnika publication, Chinchwad, Pune-411 033. Second edition, 2014; 192.*
 18. Editor Vaidya Nachiket Vachasundar. Chapter Tiktakshir basti in Marathi book *Vyavharik Panchkarma Vidyan. Sukhayu foundation, 35B, Mangalwar peth, Karhad, Dist. Satara-415110 (India). Second edition, 2011; 163.*