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Research Article

"AN AYURVEDIC TREATMENT PROTOCOL (INFERTOXY) TO IMPROVE ANTIMULARIAN HORMONE: A CASE REPORT"

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ABSTRACT

Women are born with approximately 1-2 million eggs at birth and they have those forever for their life. Starting their lifespan, starting at the menarche, the body recruits a group of follicles that grows and ovulates. By reading the levels of serum AMH can determine the ovarian reserve. The clinical symptoms of low AMH observed resemble Dhatukshayajanya vandhyatva (infertility due to depletion of body tissue).

Data of four patients diagnosed with low serum AMH level visiting OPD of Ayushakti Ayurveda Pvt Ltd were recruited for the study. Four patient's low serum AMH level data was analyzed in this case report. In all four female patients' significant positive results were observed in serum AMH levels after three months of treatment. Virechana (Detoxification) was carried out as per classics methods followed by Kaal basti (16 enemas) along with specific Ayushakti Ayurveda Medicinal Herbal Formulas manufactured by Ayushakti Ayurveda Pvt Ltd Pharmacy.

The Ayurveda treatment protocol including Detoxification as a cleansing therapy, Basti (Enema) as nourishing process along with Ayushakti Ayurveda Medicinal Herbal Formulas and herbal remedies in combination were helpful in

improving the serum AMH level to a significant level. This combination was helpful for the further course of treatment of the patients with their own eggs

KEYWORDS

Serum AMH, Infertility, vandhyatva.

INTRODUCTION

Infertility is defined as not being able to get pregnant or conceive after one year or longer time period of unprotected vaginal intercourse. Though infertility is not a physical disabling disorder, it has an impact on psychological and social life¹. Evaluation of the infertile female requires an understanding of ovulation and biomarkers of ovarian reserve². Anti-Mullerian hormone is considered as a marker for the ovarian reserve, as it has a regulative function in the activation of folliculogenesis and has an influence on atresia rate. In women, an AMH level can provide information about the fertility status and the ability to get pregnant. The term ovarian reserve describes the number and the quantity of the remaining oocytes in the follicles. The serum AMH level declines with age and at the age of 24.5 years of age its serum level is at peak³.

Causes of low AMH may be age, endometriosis, genetic factors, autoimmune disease, cancer treatment protocols, excessive smoking, pollution, and even obesity may contribute. The serum AMH level is an alternative method to evaluate the non-growing pool of follicles and extent of ovarian follicle depletion. It is a diagnostic tool for premature ovarian failure⁴.

Treatment of low AMH includes a proper nutritious diet, Vitamin-D, Coenzymes Q₁₀, Folic acid, fish oil supplements, and DHEA, testosterone supplements. As natural pregnancy is difficult in low AMH, other methods like IUI, IVF, Donor eggs, Surrogacy and

adoptions are discussed regarding treatment modality. There are some experimental ways for low AMH treatment like intra ovarian platelets rich plasma infusion, stem cells treatment, mitochondrial transfer, and ovarian transplantation, but still these methods are under experimental stages⁵. However, there is no specific treatment for low AMH patients searching for any alternative modality of medicine.

The clinical symptoms of low AMH observed resemble Dhatukshayajanya vandhyatva (infertility due to depletion of body tissue). There is an Ayushakti Ayurveda treatment protocol that is effective in improving the AMH level in the serum, thereby opening a scope of an integrated medical approach.

Data of four patients diagnosed with low serum AMH level visiting OPD of Ayushakti Ayurveda Pvt Ltd were recruited for the study. Four patient's low serum AMH level data was analyzed in this case report.

MATERIALS AND METHODS-

Investigations:

Serum AMH level: They were done before treatment, after Virechana (Detoxification) and other treatment plans after three months.



Assessment Criteria: The efficacy of the therapy was assessed before and after Treatment on the basis of objective criteria of serum AMH level reports.

Treatment Plan Infertox: Virechana (Detoxification) was carried out as per classics methods followed by Kaal basti (16 enemas) along with specific Ayushakti Ayurveda Medicinal Herbal Formulas manufactured by Ayushakti Ayurveda Pvt Ltd Pharmacy as per below.

After confirmation of patient's Dosha, Dushya and Bala – strength; the treatment Plan Infertox was set up in three stages- Remove, Restore and Renew

Ayushakti Infertox Treatment Plan (customized Virechana)

- 1) **Remove-** Eliminate toxins (Aam) from the body which are responsible for the blockages.
 - Massage with Siddha Paste & Swedan with Herbs Bolus (Pottli) for 4 days.

- External snehan – oil massage with Ayushakti Balada oil & full body Swedan with Steam box.
 - Internal snehan with Ayushakti Ghrut as per patient constitution.
 - Virechanaa Karma (detoxification)
- 2) **Restore-** This stage helps to restore the digestive fire and bring the body to its original balanced state of being.
 - Sansarjan krama and Karma Basti (Anuvasan and Niruh basti) with local Snehana and swedana on lumbar and abdominal area for 16 days.
 - 3) **Renew-** The plan is to achieve long lasting vitality by nourishing the cells.
 - Nasya (Pouring of medicated ghee, oil or liquid through nostrils) with Jivaniya ghrut and Medhya ghrut for 3 months after detoxification.

Table 1-

| No | Herb | Dose | Duration | Anupan |
|----|-----------------|--------------------|----------|----------------|
| 1 | Stree Sanjivani | 800 mg twice a day | 90 days | Lukewarm water |
| 2 | Sakhi | 300 mg twice a day | 90 days | Lukewarm water |
| 3 | Stree sathi | 575 mg twice a day | 90 days | Lukewarm water |
| 4 | Virechan | 300 mg twice a day | 90 days | Lukewarm water |

Table 1- Method of drug administration.

Case report-

Four patients pre diagnosed with low serum AMH level visiting OPD of Ayushakti Ayurveda Pvt Ltd were recruited for the study. Four patient's low serum AMH level data was analyzed in this case report.

Patient 1-

Female patient attained menarche at the age of 14 and her cycles have been regular. At the age of 30 she got married to a man 32 years old. The patients were all aware about the fertile period and they were having vaginal intercourse for 2 years without any result. After 2 years they consulted a gynecologist, under her care the hormonal profile, follicular study was done, which showed normal reports. The couple tried to conceive naturally for 4 years without any result. They decided to consult another gynecologist and repeated the set of tests including the AMH level, which tested low at 1.84 ng/dl. The gynecologist advised the patient to go for IVF treatment only after an increased AMH level as her age was 38 years and her husband had low count and low motility. The couple visited Ayushakti. They followed the treatment protocol and when the test was repeated the serum AMH level had increased to 2.35 ng/dl. The patient was able to undergo IVF treatment at the age of 38. The IVF was successful and she delivered a healthy female child.

Patient 2-

Female patient, 26 years old, had regular menses with severe dysmenorrhea was married to a 30 year old man. The patient, after unprotected vaginal intercourse for almost a year, was unable to conceive. She visited her gynecologist at the age of 27. The gynecologist advised her to have routine tests done. Her USG showed a bicornuate uterus with a thin layer and an AMH test showed low serum AMH levels 0.966 ng/dl. She had an operation to correct the uterine

issue. For the low AMH level she visited Ayushakti and followed the treatment protocol. She had significant results in her serum AMH level, which increased to 4.49 ng/dl after 3 months of treatment. Now, at 29, she is trying to conceive naturally and she has adequate ovarian reserves.

Patient 3-

A 29 year old female, married for 3 years with a history of regular menstrual periods visited Ayushakti branch with a will to become mother after being diagnosed with endometriosis Grade I with low AMH level. The patient visited with a few complaints of heavy menses every time for the last 2 years, severe dysmenorrhea, and hyperacidity for years, epigastric burning, sour belching, proctitis on and off after eating spicy food or non-vegetarian food, and fissures. Patient was continuously visiting a gynecologist regularly for her infertility issue. Her hormonal profile was within normal limits (Prolactin- 12.92, T3- 82.92, T4- 8.91, TSH- 4.64, and all other hormones – WNL) but her AMH level was 0.74. As per gynecologists opinion she had laparoscopy showing endometriosis grade- I, no tuberculosis and both the fallopian tubes patent. The patient was informed about her reports and was advised to go for IVF after 2 months as her eggs were few. The patient decided to go for alternate therapy before going for IVF. Ayushakti advised the patient to go for an Infertox treatment protocol and to try to conceive naturally. After Detoxification her acidity, proctitis, and burning epigastrium was 100% better and she lost almost 5 kg. After 3 months of treatment her AMH level was 1.69. The patient followed the plan to conceive and in a short period of time became pregnant. The patient underwent an emergency c-section due to increased blood pressure. She delivered a healthy female child with birth weight 3.15 kg.



Patient 4-

A Female patient, 31 years old, visited Ayushakti along with her husband with a complaint of infertility after 3 years of trying to conceive. In 2019 they consulted a reputed gynecologist with a complaint of irregular menses. Her menses were regular, all her reports (prolactin, FSH, LH, T₃, T₄, and TSH) were normal, yet she was unable to conceive. Then her serum AMH value was checked and that came in low. She was advised to

undergo IVF treatment, for which the couple was reluctant to do. The couple preferred to follow Ayushakti treatment protocol. After treatment for 3 months her AMH level increased to 4.38. The patient was advised to try for natural conception. After three months she tested positive for being pregnant and had a healthy male child.

RESULTS OBSERVATIONS AND DISCUSSION -

| No | | Serum AMH level | | | |
|----|------------------|-----------------|-------------|------------|-------------|
| | | P-1 | p-2 | P-3 | P-4 |
| 1 | Before treatment | 1.84 ng/dl | 0.966 ng/dl | 0.74 ng/dl | 1.125 ng/dl |
| 2 | After treatment | 2.35 ng/dl | 4.49 ng/dl | 1.69 ng/dl | 4.38 ng/dl |

Table 2- Serum AMH level before and after treatment.

In all four female patients' significant positive results were observed in serum AMH levels after three months of treatment.

Ayurveda is an ancient science with a great vision in the principles of eugenics and epigenetic, the concept is explained in detail with the help of four factors called Ritu, Kshetra, Ambu and Beej for reproduction⁶. In common all Acharyas mentioned Beej as an important factor for conception. As per ancient ancharyas, Beej not only include Shonita (Oocyte) but also Shukra (Semen) and for conception both of them must be healthy. Vata dosha is the most disturbed as it is vitiated very easily, and it depletes sukradhatu, causing

functional defects in the egg and difficulty in implantation. This vitiated Vata increases hypothalamic activity of Corticotropin releasing hormone and it inhibits the normal GnRH secretion, ultimately resulting in an ovulatory cycle⁷. Here these cases present vitiated Vata causing Dhatu Kshyaya, which affects the Artav vaha srotas resulting in the low level of serum AMH. The treatment protocol aims Shodhana (detoxification) to remove the blockages created by toxins, followed by shaman therapy for vata, pitta correction and Dhatu pushti.

Most of the time infertility due to Beejdosha is treated with the help of Panchakarma therapies like Vamana,

Virechan, Basti and sometimes Nasya. Detoxification procedures removes all the accumulated toxins and even amyloid toxins from the Artav vaha srotas (reproductive channels) and maintains proper menstrual flow, it helps to maintain the ovarian reserve by removing those blockages. All the classical Ayurveda texts advocate the use of detoxification (Shodhana) which is a cleansing process, to increase the bioavailability of the drugs. The process of Virechana (Detoxification) helps in removing the free radicals, oxidants present in the micro circulatory channels of Shukra Vaha Srotas and ultimately increases the AMH level⁸.

Renuka Beej (Vitex agnus-castus) helps in enhancing the fertility, it has secretory effect on pituitary-gonadal axis, and ultimately there is increase in the concentration of serum AMH⁹. Vitex agnus-castus is reported to be useful in treating infertility by giving benefits in anovulatory menstrual cycle, hypothalamic dysfunction, hypothalamo-pituitary-ovarian axis modulation¹⁰. Shatavari (Asparagus racemosus) is proved to enhance folliculogenesis and ovulation, it also prepares the endometrium and prevent a miscarriages¹¹. Aloe vera (Aloe barbadensis) shows an angiogenesis effect on ovaries like that of follicle-stimulating hormone histologically¹².

Pathogenesis of the female reproductive system commonly involves vata dosha, for which Basti karma is suggested as the best therapy for vata pacification, also basti is considered as a balajanana (improves tissue depletion)^{13,14}.

Nasya is one of the karma in Panchakrama, in this process, ghee, oil, and liquid is administered through the nose, as Nasa or nose is said to be the doorway to the head¹⁵. Jivaniya and Medhya ghrut nasya may stimulate the olfactory nerve which ultimately lead to

stimulation of GnRH from hypothalamus and regulates the ovarian cycle¹⁶.

CONCLUSION

The Ayurveda treatment protocol including Detoxification as a cleansing therapy, Basti (Enema) as nourishing process along with Ayushakti Ayurveda Medicinal Herbal Formulas and herbal remedies in combination were helpful in improving the serum AMH level to a significant level. This combination was helpful for the further course of treatment of the patients with their own eggs. Ayushakti treatment protocols which are used for regulating the markers of AMH can improve the quality and quantity of ovum which in turn can enhance the rate of successful conception. Therefore, this protocol can be considered, with serum low AMH, of great value for patients having fertility issues. Ayushakti is in the process of conducting research on a large scale to prove the efficacy of their treatment protocol for inclusion in integrative medical streams.

REFERENCES

1. Anjaly Muraleedharan, An Ayurvedic treatment protocol to improve anti-mullerian hormone: A prerequisite for assisted reproductive technique- A case report, Ayu. 2017 Jan-Jun; 38(1-2): 66
2. Marcelle I Cedars, Evaluation of Female Fertility—AMH and Ovarian Reserve Testing, *The Journal of Clinical Endocrinology & Metabolism*, 2022; dgac039, <https://doi.org/10.1210/clinem/dgac039>
3. Kelsey TW, Wright P, Nelson SM, Anderson RA, Wallace WH. A validated model of serum anti-mullerian hormone from conception to menopause. *PLoS One*. 2011;6:e22024
4. Pin-Yao Lin, Evaluation of serum anti-mullerian hormone as a biomarker of early ovarian aging in

- young women undergoing IVF/ICSI cycle, Int J Clin Exp Pathol 2014;7(9):6245-6253 www.ijcep.com /ISSN:1936-2625/IJCEP0001369
5. <https://www.advancesfertility.in/low-amh-causes-and-treatment/#:~:text=Treatment%20of%20Low%20AMH%3A%2D,pregnancy%20outcome%20may%20be%20improved>
 6. Prof.SrikanthamurthyK.R. Illustrated Sushruta Samhita. SariraStana Vol. 1. Varanasi: Chaukhamba Orientalia; chapter 2/33 page no 26
 7. Dr. Divya Sreenath J., Dr. Asitha H. Management of female infertility presenting with low AMH and AFC count - A Case Study. J Ayurveda Integr Med Sci 2021;1:359-366
 8. Rajdip R. Rao, Anup B.Thakar, Nilesh N.Bhatt, Rahul Gandhi, Jayesh Odedra, Kalpana S Patel. Effect of Virechanain the management of Oligoasthenozoospermia (Shukradushti): A Case Report. J. Res. Tradit. Med 2016;2(6): 166-169
 9. Batool Hossein-Rashidi, Maryam Nemati, Effects of Vitex agnus-castus extract on the secretory function of pituitary-gonadal axis and pregnancy rate in patients with premature ovarian aging (POA),Journal of Herbal Medicine,Volume 10,2017,Pages 24-30,ISSN 2210-8033,<https://doi.org/10.1016/j.hermed.2017.10.003>.
 10. Dr.Smita Naram, Role of a polyherbal combination Stree Sanjivani in female gynecological disorders.
 11. Alok S, Jain SK, Verma A, Kumar M, Mahor A, Sabharwal M. Plant profile, phytochemistry and pharmacology of Asparagus racemosus [Shatavari]: A review. Asian Pac J Trop Dis. 2013;3[3]:242-251.
 12. Rengin Kosif, Investigation of the Effects of Aloe barbadensis on Rat Ovaries: A Preliminary Study, Journal medicinal foot, Published Online: 30 Dec 2009 <https://doi.org/10.1089/jmf.2009.0035>.
 13. Dutta C. editor. Charaka Samhita of Acharya Charaka, Chikitsa Sthana. Reprint edition. Ch. 30, Ver. 115. Varanasi: Chaukamba Surabharathi Prakashana; 2004. p. 639.
 14. Dutta C., editor. Charaka Samhita of Acharya Charaka, Siddhi Sthana. Reprint edition. Ch. 12, Ver. 16. Varanasi: Chaukamba Surabharathi Prakashana; 2004. p. 731.
 15. Ayurvediya Panchkarma Vidyana, editor – Vd. Haridas Kasture, Baidhynath Ayurved publication, Nagpur, Chapt. No.7, Nasya Vidhyan, 486-487.
 16. Bhalgat, Madhuri, and Prajakta Shelke. "A REVIEW ARTICLE: AN AYURVEDIC APPROACH ON VANDHYATAVA [INFERTILITY]." (2019).