

The Effectiveness of Lifestyle Modification on Treating Infertility Due to Premature Menopause and Decreased Anti-Mullerian Hormone to 0.63 in a 41-Year-Old Woman Candidate for Egg Donation

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Abstract

What is Anti-Mullerian Hormone (AMH)?

The Anti-Mullerian hormone is produced in the testes of males and the ovaries of females and its levels vary depending on age and gender. In women, this hormone is produced by granulosa cells in ovarian follicles. Measuring the level of this hormone is important for evaluating the number of remaining eggs or follicles (ovarian reserve). The sensitivity of the AMH test is very high and is used alone for initial screening of ovarian reserve.

Importance of Anti-Mullerian Hormone in Humans

In early male fetal development, this hormone is produced by the testicular tissue and promotes the growth of male sexual organs while inhibiting the development of female sexual organs. AMH is high in newborn boys, remains high until about age 2, then gradually decreases and reaches its lowest levels during puberty. In female fetuses, AMH is not produced, allowing the female sexual organs to develop. The level of this hormone in girls remains low until puberty when its production starts in the ovaries and levels increase. AMH levels gradually decrease over the years and become nearly undetectable in the pre-menopause and menopause phases.

The Importance of This Test

Women with reduced AMH levels have lower fertility and are at higher risk for miscarriage. AMH is crucial in women's reproductive period, regulating and balancing the cyclic effects of FSH and LH in the ovaries and thus playing a role in egg maturation and development. Measuring this hormone can help estimate the probability of becoming pregnant.

The AMH test is also used in the process of in vitro fertilization (IVF), as AMH levels correlate with the success rate of IVF. A significant decrease in AMH levels indicates the onset of menopause. Treatment plans in infertility centers are based on this hormone, and if AMH levels are low, IVF and even egg donation are quickly recommended. However, it is now known that premature menopause and low AMH levels can be treated naturally through lifestyle modifications, allowing infertile women to conceive naturally and return to normal life, reducing unnecessary costs.

Objective

This study aims to investigate the positive effect of lifestyle modifications, including proper nutrition, stress control, ovarian and uterine massage, exercise, cupping, and abdominal breathing, on reducing AMH levels and premature menopause.

Method

A 41-year-old woman with a two-year history of infertility and reduced AMH sought treatment in March 2024. She had been trying to conceive for two years, married in 2018, had a molar pregnancy in 2022, and subsequently experienced menstrual irregularities, amenorrhea, and reduced AMH. She was under the care of a gynecologist and infertility specialist and was being treated with estrogen and progesterone to induce menstruation. Finally, the specialist suggested egg donation as the only treatment option.

Lab Results from March 2024:

- AMH: 0.63
- FSH: 31.7
- LH: 9.45
- Prolactin: 25.1
- Estradiol: 15.86

On the fifth day of the cycle, ultrasound showed an endometrial thickness of 1.5 mm and reduced ovarian size. In April 2024, the patient started lifestyle modification treatment, which included: correcting sleep patterns, eliminating sugar and preservatives, consuming beneficial foods such as olive oil, sesame, useful vegetables, almonds, sunflower



and sesame seeds, and pumpkin, avoiding foods with additives, exercising and walking, daily abdominal massage and cupping, relaxation and abdominal breathing techniques, stress reduction, and avoiding all harmful chemicals. Daily consumption of Vitamin C, Magniforte, Coenzyme Q10, and Omega-3 every other day. Daily consumption of Royal Jelly, abdominal massage with black seed oil. Treatment of postnasal drip with propolis and recommendation to rinse with diluted saline water.

Findings

The patient visited after about 3 months of following the above methods, considering that infertility centers had declared egg donation as the only treatment option for her. On 15th July 2024, by the grace of God, her pregnancy test was positive. The NT ultrasound and double marker tests were normal on 6th October 2024. At 16 weeks and 2 days, the ultrasound and all the screening tests, including quad marker and anomaly scan, showed a healthy fetus, and the complete health of the fetus was confirmed with a male gender. Currently, she is 24 weeks pregnant with a completely healthy fetus.

Conclusion

One of the causes of infertility is the reduction of AMH (Anti-Mullerian Hormone), which is unfortunately mistakenly referred to as ovarian reserve. In most women, egg donation and IVF are suggested. However, since low-cost and harmless methods are prioritized, considering this method is essential, given that many similar cases have also been treated.

Keywords: Infertility, Reduced AMH, Lifestyle modification

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