

Acupuncture treatment for regulating high level of FSH hormone

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Abstract

Follicle-stimulating hormone (FSH) is an important hormone with various functions, depending on the age and the type of gonads or sexual organs a person have. This hormone influences how the ovaries and testicles function. FSH levels are regulated by a sophisticated feedback loop known as the hypothalamic-pituitary-gonadal axis. Dysfunction in any of the glands or organs within this system can cause irregular levels of the hormones it controls. In Traditional Chinese Medicine (TCM), elevated FSH levels are associated with a deficiency in kidney yin energy, which is essential for producing healthy, fertile eggs. Acupuncture as a part of TCM improves blood flow into the reproductive organs and restores balance to hormonal production, often reducing FSH levels in the process. In this article is presented a case of 33 years old women with high FSH, who is trying to get pregnant. Before to start with acupuncture treatments in our TCM center, her FSH was 27,21 which is high. Other reproductive hormones like LH, Prolactin, Estradiol, Testosterone, were normal, only anti-Mullerian hormone was at a low level. Her menstrual cycle is regular and lasts 5 days. She started with acupuncture treatment on 17/10/2024, after 9 treatments, she took a hormonal test on the third day of her menstrual cycle and her FSH was 13.50. After the good results, she continued with acupuncture treatments. Acupuncture supports the body in achieving a healthy balance, promoting the production of high-quality eggs and maintaining hormonal stability.

Key words: FSH, disbalance, treatment, acupuncture, TCM

Introduction

Follicle-stimulating hormone (FSH), a member of the gonadotropin hormone group, plays a vital role in reproductive functions for both males and females. In females, it acts on granulosa cells in the ovaries, while in males, it targets Sertoli cells in the testes. The levels of FSH in the body are controlled through the hypothalamic-pituitary-gonadal (HPG) axis, a well-documented endocrine signaling pathway. FSH levels can be either too high or too low in some individuals, resulting from genetic or acquired causes. Conditions causing abnormal FSH levels may manifest in various ways, with common symptoms including irregular or absent periods, low sperm count, and infertility in both men and women. [1]

Symptoms of high FSH level include: hot flashes, vaginal dryness, sleep disturbances, emotional changes, irregular menstruation etc. Ovarian hyperstimulation syndrome (OHSS), a rare condition, can lead to elevated FSH levels in females. It is believed to be

associated with cystic ovarian enlargement and fluid leakage from the ovaries. Diagnosing based solely on FSH levels can be unreliable, especially in females, as males generally experience more stable hormone levels. Certain medications can influence FSH levels, so individuals should inform their doctor about any medications or herbal supplements they are using to avoid inaccurate results. Medications known to lower FSH levels include: Hormone replacement therapies, Oral contraceptives, Phenothiazines.[2]

The primary role of FSH is to stimulate the growth of ovarian follicles, ensuring the maturation of an egg for ovulation each month. During the follicular phase, the first half of the menstrual cycle, FSH levels rise to support ovarian follicle growth. From the group of follicles selected each month, one matures and releases an egg, a process known as ovulation. As ovulation approaches, FSH and LH work together to provide the final surge necessary for the dominant follicle to release the egg. Following ovulation, during the luteal phase, FSH production slows down but remains essential. It continues to aid in the production of estrogen and progesterone. Precise FSH values will depend on what phase of menstrual cycle patients is in. In Follicular phase is 1.4 – 9.9 IU/mL; in Ovulatory peak is 6.2 – 17.2 IU/mL; in Luteal phase is 1.1 – 9.2 IU/mL; After menopause is 19.3 – 100.6 IU/mL. FSH level change with age too.

Table1. FSH level by age

Age	FSH (UI/mL)
<35	6.5 ± 2.3
35-38	7.5 ± 2.4
38-40	7.8 ± 2.5
>40	8.5 ± 2.4

FSH levels are checked through a simple blood test. The healthcare provider might suggest this if you experience irregular or absent periods and have been unsuccessfully trying to conceive for some time. [3]

Case report

In this article is presented a case of 33 years old women with high FSH, who is trying to get pregnant naturally. Before starting with acupuncture treatments in our TCM center, her FSH was 27,21 IU/mL which is high. Other reproductive hormones like LH, Prolactin, Estradiol, Testosterone, were normal, only anti-Mullerian hormone was at a low level. Her menstrual cycle is regular and lasts 5 days. She started with acupuncture treatment on 17/10/2024, after 9 treatments, she took a hormonal test on the third day of her menstrual cycle and her FSH was 13.50 IU/mL. After the good results, she continued with acupuncture treatments.

The acupuncture treatments were made in an acupuncture clinic for acupuncture and TCM in Skopje, North Macedonia by a doctor specialist in acupuncture. Acupuncture treatments were with a duration of 30 to 45 minutes. Treatments were done indoors, on a room temperature, with normal (dry) acupuncture with fine sterile disposable needles sized 0.25x25mm. Acupuncture points used in the treatments are: DU 21, DU20, DU22, BL 4, ST29, ST30, LI4, ST36, SP9 and LV3.

Acupuncture has gained attention as an intervention for enhancing women’s reproductive health, offering effective treatment for various reproductive disorders such as dysmenorrhea, irregular menstrual cycles, abnormal menstrual flow, and premenstrual symptoms. Insights from numerous clinical trials suggest that acupuncture may exert its therapeutic effects by influencing endogenous physiological processes. These mechanisms include the regulation of neuroendocrine factors and cytokine

levels, improving blood flow to the uterus and ovaries, as well as alleviating stress, anxiety, and depression.[4]

The goal of Traditional Chinese Medicine (TCM) in addressing elevated FSH levels is to enhance ovarian function and responsiveness. Elevated FSH levels that can be treated are often linked to pathogenic heat, although other underlying pathologies may also contribute. In some cases, high FSH reflects the pituitary gland's response to impaired ovarian function, while in others, it results from excessive FSH secretion by the pituitary itself. High FSH levels can be categorized into the following patterns: Kidney yin deficiency with empty heat, Liver blood deficiency causing yin deficiency, Liver and Heart qi stagnation, Liver fire, Blood stagnation, Kidney yang deficiency, and dampness. TCM treatment can, however, improve ovarian function and regulate pituitary output, which may in turn increase the patient's fertility. [5]

Conclusion

Numerous studies worldwide suggest that Chinese acupuncture positively influences the regulation of FSH levels. As a nonpharmacological treatment, acupuncture has gained significant attention in the field of reproductive disorders, supported by substantial scientific evidence. Acupuncture treatment and Chinese medical philosophy can guide us in understanding how to support ourselves in achieving and maintaining optimal health.

References

1. Written by Ada's Medical Knowledge Team, FSH (Follicle-Stimulating Hormone), December 2024, [ada.com/hormones/follicle-stimulating-hormone/]
2. Medically reviewed by Kelly Wood, MD, Normal ranges of FSH levels and what to do if they are high or low, November 2024, [www.medicalnewstoday.com]
3. Written by Paige Figueroa, verified by Dr. Aditi Neelakantan, FSH Levels: Normal Ranges + Chart by Age, Updated on January 2025, [blog.inito.com]
4. Kim J, Lee H, Choi T-Y, Kim JI, Kang B-K, Lee MS, Joo JK, Lee KS, You S. Acupuncture for Poor Ovarian Response: A Randomized Controlled Trial. *Journal of Clinical Medicine*. 2021; 10(10):2182. doi.org/10.3390/jcm10102182 [https://www.mdpi.com/20770383/10/10/2182]
5. Daniel Elliott, The treatment of Elevated FSH Levels with Chinese Medicine, *Journal of Chinese Medicine*, October 2009, Number 91. [www.londonacupuncture.co.uk]

Conflict of interest

The author have declared that no competing interests exist.

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None.

Statement of Informed Consent

Written informed consent was obtained from the patient for his anonymized Information to be published in this article