

# **Treatment of Elevated FSH (Peri-menopause) With Traditional Chinese Medicine (TCM)**

(Case Studies)

## **How FSH is normally produced and what does it do?**

Hormones are produced from endocrine glands and some of these hormones control the normal functioning of women's reproductive organs. One of the glands, the pituitary, releases a hormone called the follicle-stimulating hormone (FSH).

FSH travels by way of the bloodstream to the ovaries where it stimulates a follicle or group of follicles to start to grow and develop. It is inside these follicles that the eggs begin to develop – one in each follicle. As the follicles grow, the follicle cells begin to release another hormone called oestrogen. Oestrogen travels up to the brain to block further release of FSH from the pituitary. This is called feedback inhibition.

## **Clinical difficulties with elevated FSH**

Elevated FSH is one of the most common conditions affecting women who are finding it difficult to conceive. Often, these women find that they are turned away from fertility clinics because they generally respond very poorly, if at all, to the drugs used to stimulate their ovaries for IVF treatment. If by chance they do respond, the egg quality is usually poor, and numbers are very few. Many fertility specialists consider that it is not possible to reverse this condition and would advise women to consider using donor eggs.

However, it is often not easy to come to terms with the idea of using donor eggs, and most women generally prefer to be able to have their own genetic child if at all possible. TCM treatment may give some hope to some of those women. We would now like to present a few of our successful clinical cases.

## **Case one - High FSH and poor fertilisation- Should donor eggs be used?**

Patient A was 32 years old and had tried unsuccessfully for 2 years to become pregnant. Her partner's semen analysis was normal, however, her FSH levels were raised between **12.3** and **16.4 U/l** during 1997. In July 1998, her FSH was **10.7 U/l**, and she began IVF treatment. Although she produced 13 follicles, only one egg was collected which did not fertilise. She was told by the clinic that it would be highly unlikely that she would conceive with her own eggs. At this time, she read an article in the Daily Telegraph about treatment with TCM at The Zhai Clinic, so she decided to give it a try. After three months of taking herbal medicine and acupuncture, she fell pregnant naturally. Subsequently she went on to have another pregnancy and now has two healthy children.

**Analysis:** This patient was in her early thirties when she came to The Zhai Clinic. She had a professional career in the medical field. She had been working hard and for long hours. Therefore it is no surprise that her general health was not as it should have been. Her treatment was to improve her general wellbeing and regenerate her reproductive system. She responded incredibly well, probably because she was relatively young and her reproductive organs were not severely affected, making it easier to restore them to their proper functional status.

## **Case two – Poor egg quality - Can it be improved?**

Patient B was 32 years old and had been trying to get pregnant for 5 years without any success. Her day 2 FSH was elevated at **12.3 U/l** in 1997 and **11.6 U/l** in 1998. Although her husband had no sperm in his semen, he had sperm in his testes, which were used for an ICSI cycle at a fertility clinic in 1998, which was unsuccessful. The couple were told

that their embryos were of poor quality and the clinic refused to treat them again, due to the elevated FSH. They then decided to try TCM. After four months of TCM treatment, her day 2 FSH levels dropped to well within the normal range. The couple was accepted onto another fertility clinic programme, and 10 weeks later, while still having TCM treatment, she embarked on a treatment cycle. This time, she successfully conceived twins.

**Analysis:** According to TCM diagnosis, this patient had a degenerative condition within her reproductive system. Her elevated FSH was associated with a slightly shorter menstrual cycle. She had some internal heat, possibly due to her lifestyle of too much spicy food and alcohol. The treatment was designed to reduce the heat and nourish her reproductive system. When she embarked on her second ICSI treatment cycle, her follicle production was quite similar to her first attempt, but this time, it resulted in 3 ‘good quality’ embryos. A pregnancy was successfully achieved with the combined treatment of TCM and assisted conception at the fertility clinic.

### **Case three – High FSH - What is the best option?**

Patient C was 39 years old and had tried unsuccessfully for 2 years to get pregnant. Her day 2 FSH were always high, between **12** and **17 U/l** in 2000. Two IVF attempts both produced 5 follicles with two eggs collected, but no fertilisation was achieved. After only 12 weeks on Chinese herb treatment, her day 2 FSH dropped to **7 U/l**. She took the herbs for another 5 months where she conceived naturally and has now given birth to a healthy girl.

**Analysis:** This case was a typical case of ovarian malfunction that caused elevated FSH. The patient’s FSH level was checked only after she failed the IVF cycles. By this time, she was already in her early forties. In general, at this stage a woman’s reproductive system has begun to degenerate. With the help of assisted conception techniques at a fertility clinic, her egg production was deemed to be reasonable. However, there may have been an egg quality problem as her eggs failed to fertilise on both occasions. Initially, we asked her to have her fallopian tubes assessed to confirm their patency. The TCM treatment was then designed to nourish her general wellbeing and regenerate her reproductive system. This resulted in a successful pregnancy.

### **Case four – Poor egg quality - Will she become pregnant?**

Patient D was 40 years old with a 10-year history of infertility. Her husband suffered from severe male infertility with an extremely low sperm count (oligozoospermia). During the last 8 years, they have endured 9 IVF/ICSI attempts without success. She produced an average of 4-5 follicles but only one egg was retrieved each time. Occasionally sperm injection resulted in an embryo. Since 1997 her FSH level became elevated, fluctuating from **11** to **15.5 U/l**. She began TCM treatment in 1998 and after 8 months, her FSH had decreased to **4 U/l**. She therefore embarked on an IVF/ICSI cycle but failed to conceive. She continued with TCM treatment for a further 8 months. Although her FSH level became slightly elevated again between **11 – 13 U/l**, by this time her general health and reproductive conditions were satisfactory from the TCM perspective. She attempted another ICSI cycle and this time she produced 5 follicles with 5 eggs retrieved and 3 became embryos, she conceived and finally gave birth to healthy twins.

**Analysis:** This case was quite challenging as the couple had a long history of infertility with 9 unsuccessful ICSI attempts, although she had reasonable follicle development. It was vital to help her to produce good quality eggs to increase the fertilisation rate. The

treatment for her was not straight forward, as the herbs initially used to reduce her FSH level and improve her general health condition were not satisfactory. Interestingly, her general health was improved, although her FSH levels remained high between **11-13 U/l**. At this point, the ICSI attempt was successful. This was one of the very few cases where in contrast to the majority of cases FSH level was not directly indicative of the egg quality.

**Case five – High FSH - What options are available apart from natural conception?**

Patient E was 43 years old with a 5-year history of infertility. Before IVF her FSH was normal but oestrogen levels were low. She had two IVF attempts in 1998 but in each case, she failed to respond to the drugs and no follicles developed. At this point, she decided to start TCM and after 4 months, she had artificial insemination (IUI) with her husband's sperm during a natural cycle. Her cycle was carefully monitored at a fertility clinic and she became pregnant after her second attempt. Unfortunately, she miscarried at 11 weeks. After the miscarriage, her FSH became elevated at **15 U/l**. She continued with TCM treatment for more than 5 months when her FSH fell back to normal. She tried another IUI cycle, this time using ovulation induction drugs. She became pregnant again, but unfortunately, miscarried at 13 weeks. Her FSH then rose significantly to **20 U/l**, but after a further 6 months of TCM treatment, and 2 unsuccessful IUI attempts with ovulation induction, she successfully conceived on her third attempt at a natural cycle IUI, and gave birth to a healthy girl in 2000.

**Analysis:** Patient E had a long history of “ME”. According to TCM, her internal system was damp and so heavy that her blood flow and energy was not able to regenerate. She felt tired all the time and very sleepy; her tongue was pale with a thick coating. Her IVF history together with her age was not at all encouraging. Our first step was to treat her with TCM and then put her on a monitored cycle to see whether she could produce a follicle after her internal system had improved. Although she conceived on her second IUI attempt, the pregnancy miscarried. This indicated that her poor general health not only affected her egg production but also the blood supply to her womb lining (endometrium) which was insufficient. At this point the treatment emphasis was on energising the blood flow and warming her womb, and eventually it was successful.

**Case six – Age 46 – Is natural conception still possible?**

Patient F had a 3-year history of infertility although she had been pregnant in the past. Her FSH was normal when she began assisted fertility treatment, but after 2 failed IUI attempts, 2 failed GIFT cycles and one failed IVF cycle, she turned to TCM at the age of 45. After more than 10 months treatment, she decided to try one more IVF. However, the clinic found her FSH raised and she was refused for the assisted fertility treatment. Nevertheless, she continued with TCM and at the age of 46 conceived naturally and gave birth to a healthy little girl.

**Analysis:** This patient did not have too much difficulty in conceiving her first child when she was 39. When she was on assisted fertility treatment, she responded quite well to the drugs and was able to produce a reasonable number of follicles even though she was 45 years old. The key issue in her management was to help her improve the degenerative condition as well as the quality of her eggs. After 10 months of TCM treatment, despite the fact that she was unable to start IVF due to her elevated FSH, she continued with the TCM treatment and achieved a spontaneous pregnancy on that same cycle.

**Case seven - Extremely High FSH at 99.4 IU/L – Is it treatable?**

Patient G was 35 years old when she came to see us. She had an unplanned spontaneous

pregnancy at the age of 32 which was terminated. She then went on the contraceptive pill for two years. When she came off the pill, her period did not return. Her GP had arranged some ovarian reserve tests for her which showed that her FSH was **81.8 IU/L**, LH was **26 IU/L** and Oestradiol was low at **56 pmol/L**. The repeat FSH test was also high at **99.4 IU/L**, LH was **32 IU/L** and Oestradiol was still relatively low. Her Anti-mullerian hormone test was less than **0.7 pmol/l**.

She was extremely distressed when she came to see us. She was slim built, suffered from high blood pressure for 2 years and complained of hot flushes. Under the TCM observation and analysis, we diagnosed her having too much Liver-heat and blood stagnation which may have caused her amenorrhea and menopausal symptoms.

We felt that it would be necessary to help her to clear her excessive Liver-heat and move the blood stagnation to regulate her periods. Only once we were able to get her period restarted then we would be able to aim for more regular periods before helping her to conceive.

During the TCM treatment her general health improved, her sleeping became better, she experienced less hot flushes and her first period returned after 4 months.

The first cycle was a short one of 18 days. The following cycle was 35 days and we repeated her hormone test and found her FSH had come down to **5.8 IU/L**, Oestradiol was slightly high, but her Anti-mullerian hormone test had slightly increased to **1.5 pmol/l**. We were planning to repeat her hormone test again at a later date but then she discovered she was pregnant. She had a wonderful pregnancy and passed all her ultrasound and nuchal scans. She gave birth to a healthy baby in September 2008.

### **Summary**

We have chosen these individual cases as they represent women with a variety of ages and infertility histories. From our own observations, TCM treatment can reduce FSH levels in some patients but not in others. However, TCM treatment can lead to a considerable improvement in ovarian function and help to regenerate a woman's reproductive system, which will further result in better quality eggs and achieve a healthy pregnancy.

Women have a finite number of eggs on birth that gradually decreases with time until menopause, when the ovaries run out of eggs. Although a raised day 2 or 3 FSH level may mean that egg numbers are running low, indicating that women are likely to respond poorly to IVF drugs, it may not give a complete picture of the condition or quality of eggs and their potential to give rise to a healthy pregnancy. The components in the herbal decoction may contribute to the recovery of ovarian function and regeneration of the reproductive system irrespective of the levels of FSH, as such demonstrated in the above cases that benefited from the TCM treatment. Furthermore, as it is shown in these case studies the combination of TCM and assisted fertility treatment can have dramatic results. Our observations are based only on a limited number of cases. To confirm the significance of the impact of TCM treatment on women with elevated FSH a controlled clinical study needs to be performed.