The treatment of Elevated FSH Levels with Chinese Medicine

Abstract

Follicle stimulating hormone (FSH) levels are routinely tested during biomedical investigations into female fertility. An appropriately low FSH level is frequently required by fertility clinics as an entry requirement for women wishing to receive assisted reproductive technology (ART) treatment such as *in vitro* fertilisation (IVF). This article presents the diagnosis and treatment of elevated FSH levels according to traditional Chinese medicine (TCM), and puts forward the view that high FSH levels do not necessarily mean that a woman is approaching menopause, but rather simply indicate the current status of ovarian functioning at the time of the test. The author asserts that with the appropriate treatment using acupuncture and Chinese herbal medicine, the proper functioning of the ovaries and anterior pituitary gland - in cases where they have been pathologically affected - can be restored. This process does not, however, necessarily imply that treatment has reversed the aging process or affected the quality of eggs produced. The theory presented is illustrated with three case histories from the author's own clinical practice.

Introduction

¬ or practitioners of traditional Chinese medicine (TCM) treating those women experiencing fertility problems who are also under the care of Western fertility clinics, follicle stimulating hormone (FSH) levels have become an important aspect of both diagnosis and prognosis. FSH levels are usually taken to be an indicator of a patient's ovarian function, egg quality and their suitability for receiving assisted reproductive technology (ART); as such they are increasingly being used as a marker for a woman's ability to conceive.^{1, 2} Because many fertility clinics use FSH as part of their patient screening criteria, and decide not to treat patients where the levels are too high, many patients have started to view low FSH levels as an entrance requirement to 'get into' their preferred clinic. As a result of this, a growing number of patients are presenting for Chinese medical treatment with the specific aim of reducing this hormone level.

FSH is produced by the anterior pituitary gland and functions to stimulate the ovaries. During the follicular phase of the menstrual cycle, FSH secreted by the pituitary gland stimulates the production of ovarian follicles and oestradiol. This continues until the oestradiol level peaks, causing the pituitary gland to increase its production of luteinising hormone (LH), which then acts as the trigger for ovulation to occur. If the ovary responds poorly to the FSH, and the level of oestradiol does not rise sufficiently, the pituitary gland recognises this and secretes more FSH to further stimulate the ovary. In this feedback system the FSH level rises as the ovary becomes less responsive. FSH levels have therefore traditionally been considered a measure of how close a woman is to menopause, as well as reflecting the quality of eggs she is producing. This accepted view has recently, however, come under more scrutiny.^{3, 4, 5}

Many patients have started to view low FSH levels as an entrance requirement to 'get into' their preferred clinic.

FSH testing

The basal FSH level is taken by blood test between days two and five of the menstrual cycle, and must always be taken together with an oestradiol reading in order to obtain a meaningful result. Due to the feedback mechanism explained above, elevated oestradiol levels may reflect lower FSH, and vice versa. Table 1 gives the typical ranges for FSH levels, although individual fertility clinics and laboratories may use different ranges, which may be stricter than those given below.⁶

Normal	3.5-12.5
Elevated or peri-menopausal	12.6 - 25.7
Post menopausal	25.8 - 148.8

Table 1: Follicular phase FSH levels (IU/L) measured on day two of the menstrual cycle.⁷

FSH and Western fertility treatment

Because much Western fertility treatment, and in particular *in vitro* fertilisation (IVF), works by stimulating the ovaries with additional FSH to produce multiple follicles,⁸ the patient's own FSH level By: Daniel Elliott

Keywords: Acupuncture, TCM, Chinese herbal medicine, fertility, infertility, IVF, follicle stimulating hormone, FSH. is used as a marker for the likely success or failure of treatment, and indeed whether treatment should be embarked upon at all. It is generally considered that if the ovary already requires high levels of stimulation in order to function at a normal level, then adding further FSH is unlikely to be beneficial, especially given that multiple follicles are required in an IVF cycle in order to provide a reasonable selection of embryos from which to choose.

The aim of treatment in reducing FSH levels is not, therefore, to try to improve egg quality, but rather to improve the functioning and responsiveness of the ovaries.

> Treatment of elevated FSH levels is made more difficult because Western reproductive medicine is currently undecided on the true importance of FSH levels. Some clinics maintain that elevated FSH levels are a clear indicator that a woman is nearing the menopause, and that a woman's eggs are 'only as good as her highest FSH level'; in such cases the clinic would ignore any subsequent lowering of FSH levels. Other clinics have the perspective that FSH levels are a measure of the *current* functioning of the ovaries, and therefore on months where the FSH level is lower there is a greater chance of stimulating the ovaries successfully. Yet other clinics assert that FSH levels are frequently more misleading than they are helpful, and that the only real test of how a woman's ovaries will respond to treatment is to put them through the full IVF stimulation process. They suggest that FSH levels are at best a rough indicator of what will happen. Consultants from these clinics have called for patients not to be rejected from treatment on the basis of elevated FSH levels alone.9 It has also been suggested that, in the competitive (and predominantly privately financed) market-place of IVF treatment, clinics are refusing to treat patients with elevated FSH levels simply to maintain their position in fertility league tables.¹⁰ Because of these differing opinions on the value of FSH testing, another hormone test anti-Mullerian hormone (secreted by small antral follicles in the ovary) - is becoming increasingly popular at fertility clinics,¹¹ although this is not part of current routine testing.12, 13 Despite such varied perspectives regarding FSH, the majority of clinics use FSH levels as the primary hormonal marker to screen patients before allowing or refusing them IVF treatment.14 A value of 12 or over will usually prevent treatment from beginning.

TCM patterns

A woman's journey towards the menopause, with its accompanying decline in ovarian function and egg quality, is described in Chinese medical terms as a natural decline in Kidney essence (jing), Kidney yin and Kidney yang. If it is the case that Kidney essence has declined, FSH levels will also inevitably rise, due to the greater stimulation required by the ovaries to produce follicles. Because it is not possible to reverse the effects of aging, trying to reduce FSH levels in such a situation (even if it were possible) would have little or no benefit to the patient - the egg quality and function of the ovaries would remain poor. Reduced ovarian function is not, however, always due to aging (see below). The output of the pituitary gland is also not always reflective of the true functioning of the ovary.^{15, 16} It is in these situations that TCM treatment can be useful and effective.

For the practitioner of Chinese medicine it is useful to consider FSH levels simply as an indicator of how hard the ovaries need to be pushed in order to produce follicles. The aim of treatment in reducing FSH levels is not, therefore, to try to improve egg quality, but rather to improve the functioning and responsiveness of the ovaries. It is important to clarify this point with the patient prior to treatment, as they may have been told by their Western fertility clinic that that there is a direct link between FSH levels and egg quality. These patients will then presume that a reduction in FSH indicates improved egg quality; this is not necessarily true.

In the clinic one usually finds that treatable¹⁷ elevated FSH levels are the result of pathogenic heat, although a variety of pathologies can be involved. In some cases the elevated FSH is an appropriate response of the pituitary to poor functioning of the ovaries, whereas in others it is the pituitary gland itself that is secreting an unnecessarily high amount of FSH. An accurate TCM differentiation of syndromes will lead the practitioner to understand which of these events might be occurring. High FSH can therefore be differentiated according to the following patterns:

Kidney yin deficiency with empty heat

Signs and symptoms: Elevated FSH, shortened follicular phase, hot flushes, night sweats, malar flush, dizziness, scanty cervical mucus, scanty period and vaginal dryness. Tongue: red with a thin yellow or no coat. Pulse: Fine and rapid, or empty and floating.

In the case of Kidney yin deficiency with empty heat, whilst the yin of the body may be in natural decline due to aging, the empty heat acts as a stimulant to the pituitary gland, causing it to release more FSH than necessary. In such cases, far from being non-responsive, the ovary reacts appropriately to the high FSH level by working harder and faster, leading to early egg maturation and ovulation.

- Herbal formula: Mu Dan Pi (Moutan Cortex) 12g, Di Gu Pi (Cortex Lycii Chinensis Radicis)9g, Bai Shao (Paeoniae Radix alba) 9g , Sheng Di Huang (Rehmanniae Radix) 9g, Fu Ling (Poria) 6g, Xuan shen (Radix Scrophulariae) 6g, E Jiao (Asini Corii Colla) 6g, Nu Zhen Zi (Ligustri lucidi Fructus) 6g, Han Lian Cao (Ecliptae Herba) 6g, Qing Hao (Artemisiae annuae Herba) 6g, Huang Bai (Phellodendri Cortex) 6g.
- Patent formulas: *Zhi bai di huang san* (Anemarrhena, Phellodendron and Rehmannia Pill), *qing jing san* (Clear the Menses Powder), *tian wang bu xin dan* (Emperor of Heaven's Special Pill to Tonify the Heart)
- Acupuncture points: Lieque LU-7 and Zhaohai KID-6, Guanyuan REN-4, Sanyinjiao SP-6, Yinxi HE-6 and Fuliu KID-7, Rangu KID-2.

Liver blood deficiency leading to yin deficiency

Signs and symptoms: Elevated FSH, a scanty or pale red menstrual flow, a thin endometrial lining, low blood pressure, dizziness, insomnia, poor memory and a dull complexion. Tongue: Pale and thin. Pulse: Choppy

This pattern is more common than the previous one in women under the age of 30 who present with elevated FSH. Patients often feel they are leading a very healthy life, but are frequently underweight and over-exercising.

- Herbal formula: Dang Gui (Angelicae sinensis Radix) 12g, Sheng Di Huang (Rehmanniae Radix) 9g, Bai Shao (Paeoniae Radix alba) 12g, Chuan Xiong (Chuanxiong Rhizoma) 6g, Shu Di Huang (Rehmanniae Radix preparata) 12g, Shan Zhu Yu (Corni Fructus) 9g, Fu Ling (Poria) 6g, Ze Xie (Alismatis Rhizoma) 6g, Mu Dan Pi (Moutan Cortex) 12g, Shan Yao (Dioscoreae Rhizoma) 9g, Sha Yuan Zi (Astralagi complanati Semen) 6g.
- Patent formulas: *Gui shao di huang tang* (Angelica Paeonia Rehmannia Decoction) or *liu wei di huang san* (Six-Ingredient Powder with Rehmannia) and *si wu tang* (Four Substance Decoction) combined.
- Acupuncture points: Lieque LU-7 and Zhaohai KID-6, Zusanli ST-36, Guanyuan REN-4, Sanyinjiao SP-6, Ququan LIV-8, Pishu BL-20, Qichong ST-30.

Liver and Heart qi stagnation

Signs and symptoms: Elevated FSH, emotional instability, anger, anxiety, sawtooth-shaped basal body temperature (BBT) chart¹⁸ during the follicular phase of the cycle and premenstrual breast distention. Tongue: Raised red sides and tip. Pulse: Rapid and wiry.

In the case of Liver and Heart qi stagnation, the heat generated from stagnation causes the pituitary to release more FSH than necessary. Because of the person's fluctuating emotional state, this heat is more intermittent than that caused by yin deficiency and so it is possible, but less likely, that there will be a shortened follicular phase. This pattern often manifests as a significant instability in the basal body temperature.

- Herbal formula: Dang Gui (Angelicae sinensis Radix) 9g, Bai Shao (Paeoniae Radix alba) 9g, Fu Ling (Poria) 6g, Bai Zhu (Atractylodis macrocephalae Rhizoma) 6g, Chai Hu (Bupleuri Radix) 6g, Bo He (Menthae haplocalycis Herba) 3g, Mu Dan Pi (Moutan Cortex) 9g, Shan Zhi Zi (Gardeniae Fructus) 6g, Xiang Fu (Cyperi Rhizoma) 6g, Ye Jiao Teng (Polygoni Multiflori Caulis) 9g, Bai He (Lilii Bulbus) 9g, Fu Xiao Mai (Tritici Fructus Levis) 9g, Zhi Gan Cao (Glycyrrhizae Radix preparata) 3g.
- Patent formula: *Jia wei xiao yao san* (Augmented Rambling Powder).
- Acupuncture points: Neiguan P-6, Yintang (M-HN-3), Taichong LIV-3, Shenmen HE-7, Zhongji REN-3, Zusanli ST-36, Sanyinjiao SP-6, Hegu L.I.-4.

Liver fire

Signs and symptoms: Elevated FSH, early ovulation, irritability, hot flushes, night sweats, headaches and an excessive menstrual flow. Tongue: Red, raised sides. Pulse: Rapid and wiry.

This pattern is essentially a more severe version of the previous pathology.

- Herbal formula: Mu Dan Pi (Moutan Cortex) 9g, Di Gu Pi (Cortex Lycii Chinensis Radicis) 9g, Bai Shao (Paeoniae Radix alba) 12g, Qing Hao (Artemisiae annuae Herba) 9g, Sheng Di Huang (Rehmanniae Radix) 12g, Huang Bai (Phellodendri Cortex) 6g, Fu Ling (Poria) 6g, Shan Zhi Zi (Gardeniae Fructus) 6g.
- Patent formula: *Jia wei xiao yao san* (Augmented Rambling Powder).
- Acupuncture points: Taichong LIV-3, Xingjian LIV-2, Guanyuan REN-4, Sanyinjiao SP-6, Quchi L.I.-11.

Blood stagnation

Signs and symptoms: Painful periods, dark and clotted menstrual flow, pain at ovulation, menstrual spotting before or after the period, a history of endometriosis, fibroids and adhesions. Tongue: Purple body, dark sublingual veins. Pulse: Wiry.

In the case of blood stagnation causing high FSH, the functioning of the ovary has been compromised by the surrounding blood stagnation. It may be the case that endometriosis, adhesions or surgical scar tissue are preventing the ovary from functioning fully, and the pituitary gland responds by appropriately releasing more FSH to stimulate it. Treatment to facilitate the free flow of blood and qi in the surrounding area will improve the functioning of the ovary and lower the level of FSH.

 Herbal formula: Sheng Di Huang (Rehmanniae Radix) 12g, Dang Gui (Angelicae sinensis Radix) 12g, Chi Shao (Paeoniae Radix rubra) 12g, Chuan Xiong (Chuanxiong Rhizoma) 8g, Tao Ren (Persicae Semen) 6g, Hong Hua (Carthami Flos) 6g, Dan Shen (Salviae miltiorrhizae) 7

Radix) 6g, Yan Hu Suo (Corydalis Rhizoma) 4g.

- Patent formulae: *Tao hong si wu tang* (Four-Substance Decoction with Safflower and Peach Pit), *gui zhi fu ling san* (Cinammon Twig and Poria Powder).
- Acupuncture points: Gongsun SP-4 and Neiguan P-6, Xuehai SP-10, Taichong LIV-3, Sanyinjiao SP-6, Siman KID-14, Shuidao ST-28.

Kidney yang deficiency and dampness

Signs and symptoms: Possible diagnosis of polycystic ovarian syndrome (PCOS), elevated LH, delayed menstruation, scanty menstrual flow, dragging pain relieved by heat, anovulation, water retention, weight gain, abdominal bloating, fatigue, vaginal discharge, dizziness and a feeling of heaviness. Tongue: Pale and swollen with a sticky coating. Pulse: Slow, deep, weak and slightly slippery.

In this pattern the ovary is less responsive due to the yang deficiency, and its functioning is further impaired by any surrounding dampness. Again, the pituitary gland responds appropriately by raising the FSH to push the ovary harder. Improved functioning of the ovaries following correct treatment to tonify Kidney yang and resolve damp will see the FSH reduce.

- Herbal formula: Shu Di Huang (Rehmanniae Radix preparata) 12g, Rou Cong Rong (Herba Cistanches) 12g, Huang Jing (Polygonati Rhizoma) 9g, Bu Gu Zhi (Psoraleae Fructus) 8g, Chuan Shan Jia (Manitis Squama) 8g, Gui Zhi (Cinnamomi Ramulus) 6g, Zao Jiao Ci (Gleditsiae Spina) 8g, Zhe Bei Mu (Fritillariae thunbergii Bulbus) 8g.
- Patent formula: *You gui wan* (Restore the right pill) combined with either *cang fu dao tan wan* (Atractylodes-Cyperus Conducting Phlegm Pill) or *gui zhi fuling san* (Cinammon Twig and Poria Powder).
- Acupuncture points: Lieque LU-7 and Zhaohai KID-6,, Zusanli ST-36, Sanyinjiao SP-6, Taixi KID-3, Pishu BL-20, Shenshu BL-23, Yinlingquan SP-9, Shuidao ST-28.

Other pathologies are possible, but rare, and patients are usually found to present with some combination of the patterns above.

For all of the patterns above, the treatment principles for both acupuncture and herbal medicine should emphasise the clearing of excess - particularly clearing heat and moving blood - rather than tonifying the Kidney. With the exception of patients under 35, where age and timescales are unlikely to be such a pressing issue, nourishing the Kidney can be an unduly lengthy process. If the practitioner sets out to fight against a naturally declining Kidney energy, it may be that time runs out and menopause starts before the Kidney has been sufficiently strengthened. Although apparently constituting symptomatic treatment, concentrating on clearing heat can provide a quick and effective method to lower FSH levels and thus provide a window of opportunity to allow patients access to treatment that might otherwise be refused. That said, clearly the role of Kidney deficiency should not be ignored and in cases where the practitioner judges that there is enough time, treatment can and should be focused here.

Treatment considerations

Patients with high FSH levels involving empty heat usually respond well to TCM treatment. Particularly where the empty heat has caused a shortened follicular phase, treatment can see a quick and dramatic reduction in FSH levels. Full heat caused by Liver and Heart qi stagnation can also be cleared relatively quickly. If the patient continues with a stressful lifestyle, however, or if anxiety about conceiving continually dominates their thoughts, then the stagnation and subsequent heat can quickly return. Prior to considering IVF treatment, many patients will have taken Clomid (clomiphene), a drug with a heating, yin-consuming action that can exacerbate many of the pathologies listed above. Unless the drug has been used for six months or more, however, its effects are likely to be short-term and easily remedied. Although TCM theory states that full heat is frequently due to poor diet and lifestyle, this is rarely the case amongst this client group. The majority of patients have usually already taken a proactive stance to improve their chances of conception by cutting out alcohol, caffeine and other toxins from their diet. They will often be leading very healthy lives, taking appropriate exercise and eating good diets. Some patients will, however, have to find ways to reduce work and life stress as much as they can.

While some degree of Kidney deficiency can be assumed in all patients over 35, and will therefore be present in the majority of patients coming for treatment of high FSH levels, it is important to diagnose whether the elevated FSH is the result of an actual pathology or merely the natural consequence of aging. In many situations this can be difficult to identify; the patient may present with a treatable pathology that appears to be the cause, but the appropriate treatment sees no FSH reduction. With an accurate diagnosis and the appropriate treatment, a reduction in FSH levels should be seen within three menstrual cycles, although some fluctuation in FSH readings may still occur.

This can be a difficult area in which to work because patients will frequently have been rejected from Western fertility clinics, sometimes told bluntly that they should give up hope of conceiving, or else advised that they should pursue the route of using donor eggs if they wish to conceive. With anxiety levels high and their TCM prognosis apparently directly opposed to that of their Western clinic, great scepticism and impatience are commonly encountered and require careful patient management. This is actually the most difficult part of treatment, especially because patients may present with a clearly identifiable pathology that *could* be the cause of

their elevated FSH level, without this guaranteeing that their ovarian function and egg quality have not already been irreversibly reduced by age, disease or trauma. Frequent basal FSH testing can provide good feedback on patient improvement, but can also unfortunately create extra pressure and anxiety in the patient. This anxiety, also seen in some patients who monitor their BBT daily in order to track their cycle, can potentially be more detrimental to their condition than the advantages gained from collecting the information. Therefore as well as deciding upon a diagnosis and a prognosis, the practitioner must also make a judgement on how to monitor the progress of their patient appropriately. This type of clinical judgment necessarily comes, however, from clinical experience rather than textual explanation.

Case studies

The following are three examples from the author's clinical practice. The first is more unusual - it describes the fairly dramatic changes experienced by a young woman with relatively severe pathology - and is included here simply to show what is possible with TCM treatment. The other cases illustrate pathologies that are more commonly seen and treated in the clinic.

Case study 1

D was 28 years old and had been diagnosed with premature ovarian failure on the basis of a single FSH reading of 45 IU/L. She had been told that she could not have IVF treatment. She had previously been diagnosed with endometriosis - her periods were painful, dark and clotted, and she was anovulatory. Her tongue had dark sublingual veins and purple patches on the tongue body.

In the case of this patient the functioning of the ovaries had been impaired by blood stagnation (manifesting as endometriosis) and the FSH level had risen as the pituitary pushed harder to overcome this situation. She was treated with a variation of gui zhi fu ling san (Cinammon Twig and Poria Powder) in the second half of her cycle and *liu wei di huang* san (Six-Ingredient Powder with Rehmannia) with additional blood tonics and blood movers in the first half. Acupuncture treatment focused on moving qi and blood throughout her cycle, with treatments timed during her period, and at the time we thought ovulation ought to happen. Acupuncture points included Gongsun SP-4 with Neiguan P-6, Xuehai SP-10, Taichong LIV-3, Diji SP-8, Siman KID-14 and Hegu L.I.-4. Within three cycles, her period became much improved in terms of pain and flow. Her fourth cycle after beginning treatment was ovulatory, and a day two FSH test measured 11.2 IU/L. D felt that she

If the practitioner sets out to fight against a naturally declining Kidney energy, it may be that time runs out and menopause starts before the Kidney has been sufficiently strengthened.

only had a short window of opportunity, so instead of waiting to see if she could conceive naturally she opted for IVF treatment, which was agreed by her clinic due to her new low FSH level. The treatment was successful and she subsequently gave birth to a little boy. Two years later D conceived naturally and gave birth to her second child.

Case study 2

R was 40 when she first came to the clinic. Her most recent FSH level had been 15 IU/L, and this had previously fluctuated on a monthly basis between 13 and 18 IU/L. She had previously attempted an IVF cycle, but had responded so poorly - producing only two follicles - that the cycle had been abandoned. The IVF clinic in question subsequently refused further treatment. Her menstrual cycle was short, and she tended to ovulate on day nine. In addition to this her period and cervical mucus were scanty and her anxiety levels were extremely high. Her diagnosis was of Kidney yin deficiency with empty heat, with Heart and Liver qi stagnation. She was prescribed a modification of zhi bai di huang san (Anemarrhena, Phellodendron and Rehmannia Powder) with Yuan Zhi (Polygalae Radix), He Huan Pi (Albiziae Cortex) and Xiang Fu (Cyperi Rhizoma) added.

Within two cycles her FSH level had decreased to below 10 IU/L, and she was feeling much calmer. She then approached another IVF clinic who accepted her as a patient, and treatment was started the following month. She produced five follicles, four of which fertilised and three were transferred. All of the embryos produced were considered to be of a good grade. She fell pregnant and gave birth to a healthy baby boy. As soon as her first child had been born, she returned for acupuncture and herbal treatment, and subsequently had a further successful IVF treatment which resulted in the birth of her second child.

Case study 3

C was 42 when she came to the clinic. She had no known gynaecological problems and was hoping to have IVF treatment (using donor sperm, as she did not have a current partner). At this point her FSH was tested and found to be 33 IU/L, and she was informed that donor eggs were her only option. Her cycle was 24 days and her period was heavy and bright red. In addition she suffered from night sweats and recurrent

9

bouts of cystitis. The diagnosis was Kidney yin deficiency with empty heat, and by her own choice she was treated using just acupuncture.

Within two cycles her night sweats had stopped, the cystitis had improved and her third menstrual cycle after commencing acupuncture had lengthened to 27 days. Acupuncture points used included Lieque LU-7 (right) and Zhaohai KID-6 (left), Zusanli ST-36, Sanyinjiao SP-6, Taixi KID-3 and Shaofu HE-8. Her FSH reading on the following menstrual cycle was 8.5 IU/L and the clinic reluctantly agreed to try an IVF cycle with her. She continued to have acupuncture throughout her treatment, and produced six follicles, four of which fertilised and led to a healthy pregnancy and the birth of a baby girl.

It is important to be clear that in all of these cases, the reduction in FSH and subsequent pregnancy did not necessarily mean that there had been a reversal of the aging process or an improvement in egg quality. Such cases rather demonstrate the inaccuracy in diagnosis and prognosis made by the Western fertility clinics that test these patients. While some patients may feel that acupuncture and herbal medicine have miraculous effects in turning back their 'fertility clocks', it is actually the effectiveness of TCM diagnosis and prognosis rather than the treatment itself that allows for success in this area. In other words, it is not that TCM treatment is so all-powerful that it can help any woman conceive irrespective of age and health, but it is rather the diagnostic framework of Chinese medicine that is so valuable and enables TCM clinicians to clearly see (and treat) the pathological processes responsible for driving up the FSH levels; in such cases it becomes clear that the Western medical diagnosis or prognosis was incorrect. Thus patients may frequently be told that their chances of conception are less than one per cent, yet clinical experience amongst TCM practitioners show radically higher success rates than this. This is also demonstrated by the high IVF success rates achieved by clinics that do not use elevated FSH levels as the sole reason for refusing treatment.

Conclusion

While Western fertility clinics continue to debate the actual significance of FSH levels, TCM practitioners have an excellent opportunity to provide effective treatment to patients who would otherwise be unable to access ART. With links still being made amongst fertility specialists between FSH levels and ovarian function, egg quality and menopause, it is important that patients understand that a reduction in this hormone level following TCM treatment does not necessarily mean that time has been turned back, and that little or nothing may have happened to improve the quality of the eggs produced. TCM treatment can, however, improve ovarian function and regulate pituitary output, which may in turn increase the patient's fertility. It may also, as is often the case, demonstrate that a patient's

previously elevated FSH level was not truly representative of their suitability for Western fertility treatment, and thus allow them access to ART treatment that would otherwise be denied.

With little Western scientific agreement and even less TCM literature regarding this subject, this article is based mostly on the clinical experience of the author, and as such it is meant as a guide for practitioners rather than a definitive text. It is hoped that this information will stimulate further research and discussion in this area.

Daniel Elliott is an acupuncturist and herbalist working with gynaecological and fertility issues. He is Clinical Director of the London Acupuncture Clinic (www.londonacupuncture.co.uk), a multi-practitioner clinic which specialises in the treatment of infertility and gynaecological issues.

References

- 1 Scott RT, Toner JP, Muasher SJ, Oehninger S, Robinson S, Rosenwaks Z. (1989). "Follicle stimulating hormone levels on cycle day 3 are predictive of in vitro fertilization outcome", *Fertil Steril* 51:651–4
- 2 Toner JP, Philput CB, Jones GS, Muasher SJ. (1991). "Basal follicle-stimulating hormone level is a better predictor of in vitro fertilization performance than age", *Fertil Steril 55:784–91*
- 3 Barnhart K, Osheroff J. (1999) "We are overinterpreting the predictive value of serum follicle-stimulating hormone levels", *Fertil Steril* 72: 8–9.
- 4 Ilse A.J. van Rooij, Evelyn de Jong, Frank J.M. Broekmans, Caspar W.N. Looman, J.Dik F. Habbema, te Velde Egbert R. (2004). "High follicle-stimulating hormone levels should not necessarily lead to the exclusion of subfertile patients from treatment", *Fertil Steril* 81:1478-85
- 5 Esposito MA, Coutifaris C, Barnhart KT. (2002). "A moderately elevated day 3 FSH concentration has limited predictive value, especially in younger women", *Hum Reprod* 17:118–23
- 6 R. Scott Jr., K. Elkind-Hirsch, A. Styne-Gross, K. Miller, J. Frattarelli (2008). "The predictive value for in vitro fertility delivery rates is greatly impacted by the method used to select the threshold between normal and elevated basal follicle-stimulating hormone", *Fertil Steril 89:868-878*
- 7 Figures as used by The Doctors Laboratory (TDL), 60 Whitfield

Street, London, W1T 4EU, accessed June 2009

- 8 Mostcommonlyinaninjectable form, such as Gonal-F, Puregon, Menopur or Fostimon.
- 9 Abdalla, H and Thum MY (2004). "An elevated FSH reflects a quantitive rather than a qualitative decline of the ovarian reserve" *Hum Reprod* 19:893-898
- 10 Sharif K and Afnan M (2003). "The IVF league tables: time for a reality check", *Hum Reprod.* 18:483-485
- 11 Visser JA, de Jong FH, Laven JS, Themmen AP (2006). "Anti-Mullerian hormone: a new marker for ovarian function", *Reproduction* 131:1–9.
- 12 Singer T, Barad D, Weghofer A, Gleicher N (2009). "Correlation of antimullerian hormone and baseline follicle-stimulating hormone levels", *Fert Steril* 91:2616-2619
- 13 Practice Committee of the American Society for Reproductive Medicine (2006). "Optimal evaluation of the infertile female", *Fertil Steril* 86:S264–7
- 14 BroekmansFJ,KweeJ,Hendriks DJ,MolBW, Lambalk CB 2006). "A systematic review of tests predicting ovarian reserve and IVF outcome", Hum Reprod Update 12:685–718.
- 15 Khalifa E, Toner JP, Muasher SJ, Acosta AA (1992). "Significance of basal follicle-stimulating hormone levels in women with one ovary in a program of in vitro fertilization", *Fertil Steril* 57:835–9 [Erratum in: Fertil Steril 58:458.].
- 16 Lambalk CB, de Koning CH (1998). "Interpretation of elevated FSH in the regular

menstrual cycle". Maturitas 30:215-20

17 The term treatable here perhaps requires some explanation. The point being made is that for some women who attend TCM clinics, a high FSH level is neither treatable nor pathological, but is rather a normal aspect of getting older. As such it does not require intervention with acupuncture or herbal medicine - and even with such intervention it is unlikely to change the woman's ability to produce mature follicles or conceive. This article focuses on 'pathologically high' FSH, which is, by definition, treatable

18 Measuring the basal body

temperature (BBT) has

traditionally been used as a

method of contraception; the temperature rise caused by

an increase in progesterone

levels after ovulation provides a guide of when a woman is

fertile. TCM fertility Doctors in China have developed

methods of diagnosis that include the different patterns syndromes. This has been documented Virginia Wood in a previous issue of this journal [Wood, V (1999). "Infertility and the Use of Basal Body Temperature in Diagnosis and Treatment", Journal of Chinese Medicine 61:33-41]

made by BBT charts, matching

them with specific TCM

Want to add something new to your practice?

 Add some bodywork to your existing skills with our Diploma in Tui Na, the UK's most in-depth tui na course

 Become a competent and confident herbalist with our well established, fully EHTPA accredited MSc in Oriental Herbal Medicine*

 Keep your Qi healthy and fresh to improve your treatments with our Practitioner Diploma in Qi Gong

Call 020 8369 5733 for more information



Chinese medicine trai naturally outstanding

www.lcta.com *awarded by University of East London

Diploma in tui na

We will be running a second one-year tui na (Chinese therapeutic massage) diploma course with a start date of 15 January 2010. Attendance will be twice a month on Fridays. The course is divided into three modules, each lasting four months. For further details and an application form please email Silvia Hovancova, the course registrar silvia.hovancova@cicm.org.uk

CPD events for acupuncturists/CHM practitioners Jill Glover

Understanding IVF 22 Oct 2009

Martin Powell

Neuromuscular taping for acupuncturists Basic 29 Oct 2009 Advanced 19 Nov 2009

Charlie Buck Understanding herb pairing dynamics 26 Nov 2009 Needling skills 27 Nov 2009

Bill Rvan

The art of feeling gi 7-8 Dec 2009 The art of projecting gi 10 Dec 2009

Find out more about these and other events or register online at cicm.org.uk or call Silvia on 0118 950 8880



11 78 www.medigi.ch

Fax +41 81 257

MediQi · Quaderstrasse 28 · CH-7000 Chur · Tel. +41 81 257 11 77 ·

College of Integrated Chinese Medicine

19 Castle Street Reading Berkshire RG1 7SB t 0118 950 8880 e admin@cicm.org.uk



MediQi · Leader in Traditional Chinese Medicine in Switzerland

We are continuously looking to recruit

DOCTORS OF TRADITIONAL CHINESE MEDICINE (TCM)

to one of our eight MediQi centres in Switzerland.

An university degree in the study field of TCM is required.

Your knowledge is underlined by excellent skills in TCM and some years of practical experience in treating with the methods of TCM.

Please apply online, attaching your cover letter as well as your detailed CV, the time schedule showing the total hours of TCM education as well as all relevant certificates via info@medigi.ch.