

The Treatment of Premature Ovarian Failure Using Traditional Chinese Medicine

by Li Qin Zhao

Premature ovarian failure (POF) is also called premature menopause, it is the loss of ovarian function in women under the age of 40, or even in the ages between 15 and 29^[1]. Women with POF do not ovulate each month and often accompanied with elevated follicle stimulating hormone (FSH). This loss of function can be due to a less than normal amount of follicles or a dysfunction in the ovaries. A woman can be affected by POF at any age or time in her life. It can happen before or after she has had children, or while she is still planning her family. Approximately 1- 4% of the female population has POF^[2].

How does POF affect fertility?

Western medicine view

Ovulation and FSH

Most women are born with about 1-2 million eggs, but this reduces to about 300,000 by puberty^[3]. From then on, every monthly cycle about 100 eggs start out to end up with one egg being ovulated^[3, 6]. FSH is a hormone that is produced and released by the pituitary gland, and triggers the follicles each month to stimulate the ovaries to develop follicles, ripen the eggs and eventually release the mature egg. If the follicles do not mature, and produce oestrogen to stop the production of FSH, FSH will continue to be produced and rise to a high level. This is why women with POF are checked for high levels of FSH. A baseline FSH blood test on day 2 or 3 of the menstrual cycle is expected to be below 10 iu/l in women with reproductive potential, FSH level of 10-12 iu/l is considered borderline^[4].

FSH and POF

The gradual loss of eggs during a woman's fertile years is normal. As women age, FSH starts fluctuating, this reflects women's natural changing process. But in women with POF, the loss of eggs is accelerated, and their ovaries are depleted and the follicles become less responsive to hormonal stimulation. As a consequence, the hypothalamus sends the pituitary gland messages to try and work harder to stimulate the ovaries, therefore

more FSH is produced. In such cases, estradiol (oestrogen) production is reduced, the uterine lining is too thin for implantation, and the eggs had no chance to fully mature, and the woman becomes progressively less fertile. They can't even embark on IVF or IUI until their FSH drop to the cut-off line, as they are more likely to be a poor responder to fertility drugs used to stimulate their ovaries during IVF or IUI treatment.

Possible causes

Unfortunately for most women the cause is unknown. There are, however some possible causes that may be identified which include:

- Autoimmune disorders
- Chromosomal / Genetic defects
- Discontinuing the use of oral contraceptives
- Damage from pelvic surgery, abortion, ectopic pregnancy, miscarriage or pelvic inflammatory disease (PID)
- Chemotherapy or radiotherapy
- Turner syndrome
- Thyroid dysfunction
- Viral infection
- Inadequate gonadotropin secretion or action
- Heavy smoking and drinking
- Long-term stress, anxiety or depression
- Eating disorders

TCM philosophy

TCM views most cases of POF as a combination of excess and deficiency patterns^[5, 6]. The majority of POF women I have treated have presented with a severe kidney yin deficiency, and often accompanied by spleen qi and liver blood deficiency, as well as liver qi stagnation and deficient heat, although some cases may also have blood stasis.

Kidney yin deficiency together with Spleen qi and blood deficiency

Being born with a genetic constitution of kidney yin deficiency, or long term intake of contraceptive pills, suppressed kidney yin and energy; or a weak condition after a long-term illness, or lost excessive amount of blood during labour, or miscarriage, or ectopic pregnancy, impairs spleen qi, that fails to support the stomach's transforming function, causing qi and blood deficiency. As a consequence, the penetrating and conception meridians become 'empty', the uterus and ovaries are being starved of blood flow, its function begins to decline, then POF occurs, and the woman becomes infertile.

Liver qi stagnation together with liver blood deficiency and concurrent heat

Extreme stress, anxiety or worry, or working long hours, may cause liver qi stagnation, failing to regulate and store blood likewise; chemotherapy, radiotherapy, or heavy drinking and smoking, could cause depletion of kidney yin and deficiency heat, and insufficient liver blood. This will eventually leading to malfunction of uterus and ovaries, and interrupting hormonal balance. As a result, POF develops.

Blood stasis in the uterus

After a pelvic operation, abortion, miscarriage or PID, the blood stagnates in the uterus and the endometrium become unsmooth. Poor blood circulation causes an unfriendly environment in the pelvic area and impairs nourishment of uterus and ovaries. Consequently the ovaries stop performing and fail to respond to message from the brain, creating an imbalanced hormone level.

Clinical symptoms

The main symptoms of POF are: short or irregular menstrual cycle with scanty bleeding, amenorrhea, early ovulation or an-ovulation, hot flashes, night sweats, insomnia, headaches, irritability, lethargy, lack of cervical mucus, decreased sex drive, painful sex and infertility. These symptoms may appear suddenly over a couple of months, or gradually over several years. Some women may continue to have normal periods and have no symptoms. Diagnosis may only be discovered when FSH levels are measured after years of unsuccessful conception.

Western medicine therapy

POF is an extremely frustrating diagnosis, since western medicine generally can do very little for it. The treatment is usually oestrogen replacement therapy, such as HRT (hormone replacement therapy). This may make the women menstruating again, and perhaps

relieve some of the symptoms. However, this is not an option for women who are attempting to conceive, as the artificial oestrogen sends signals to the brain that it doesn't need to stimulate the ovaries to produce oestrogen, therefore the whole hormonal system then goes to sleep. Women with POF are often advised to consider IVF with donor eggs. While this might give them a baby, it does nothing to address the underlying failure of the ovaries.

TCM treatment

Since the average age of POF onset is twenty-seven¹¹, most women prefer a treatment that will restore their ovaries and hormonal system to fully functional health, and then to be able to conceive with their own eggs and have their own genetic children. TCM is one of the most effective treatment methods for POF.

TCM treatment principle

I've summarised below the TCM treatment principle according to my clinical experience and TCM academic literature I've reviewed:

The key point of treating POF is to nourish kidney yin to support oestrogen, strengthen spleen qi and tonify blood to increase blood supply to the uterus and ovaries. Together this restores ovarian function, thickens the uterine lining and rectifies hormonal imbalances, therefore promotes ovulation, and enhances the chances of conception. Harmonising liver qi and blood to regulate the menstrual cycle and improve blood circulation; nourishing heart blood to calm the mind; balance yin-yang to improve ovarian function. Together this reduces FSH level, improves egg quality and increases fertility. Remove blood stasis to soften scar tissue, strengthen uterine self-healing function and improve general wellbeing. Create a welcoming environment in the uterus for the eggs to be fertilised and implanted.

TCM prescription

Differentiation	Patent Herbs	Dried herbs or concentrated powders	Acupuncture points
Kidney yin deficiency together with spleen qi and blood deficiency	Liu Wei Di Huang Wan (Six Flavour Pill), or ZuoGuiWan(Restore Left Kidney Pill) combine with Gui Pi Wan (Restore Spleen Pill) or Fu Ke Yang Rong Wan (Woman's Tonic Pill).	Tu Si Zi, Nu Zhen Zi, Han Lian Cao, Mai Men Dong, Shan Yao, Dang Gui, Shu Di Huang, Gou Qi Zi, JiXieTeng.	Baihui (DU20),Guanyuan(Ren4), Qihai (Ren6),Zigong(EX-CA1), Neiguan(Pc6), Xiehai (Sp 10),Zusanli(St 36), Sanyijiao(Sp6), Taixi(Ki3), Pishu (UB20), Shenshu(UB23)
Liver qi stagnation together with liver blood deficiency and concurrent heat	Jia Wei Xiao Yao Wan (Modified Easing Pill), Yang Xie An Shen Wan (Nourish Blood and Ease Mind Pill)	Chai Hu, Mu Dan Pi, Yie Jiao Teng, SuanZaoRen, Chong Wei Zi, Bai Shao Yao, Xiang Fu,Nu Zhen Zi, Han Lian Cao, Gou Qi Zi	Yintang(EX-HN3), Quchi (LI 11),Shenmen(He7),Waiguan (SJ 5),Zhongji (Ren 3), Guilai (St 29), Taichong (Liv 3), Hegu (LI 4), Ganshu(UB18),Geshu(UB17)
Blood stasis in the uterus	Xie Fu Zhu Yu Wan (Drive Out Stasis from the Mansion of Blood Pill), or Tao Hong Si Wu Wan (Four Substance Decoction with Safflower and Peach Kernel)	Tao Ren, Hong Hua, Dan Shen, Chi Shao Yao, Shu Di Huang, ChuanXiong, Mu Dan Pi, Yi Mu Cao, Xiang Fu, ZeLan	Tianshu(St25),Guanyuan (Ren 4),Zhongji (Ren3),Diji(Sp8),Guilai(St29), Xuehai(Sp10),Hegu(LI4), Sanyinjiao (Sp6), Shangliao (UB 31), Ciliao (UB 32)

Case StudiesSecondary infertility with POF

Kate, 32 years old, had taken the contraceptive pill for over 10 years before trying for a baby. Her period stopped for 6 months after she came off the pill. She then conceived her first child naturally 12 months later. She didn't menstruate for 10 months after giving birth to her daughter, and had breast-fed the baby for 3 months. Her period was irregular when she started menstruating again. The shortest cycles were 22 days with light bleeding, and she then stopped menstruating altogether after 5 months. She went to see a consultant in the hospital, where her day 2 blood tests revealed a high FSH level of 46iu/l. She was diagnosed with POF, and was told that she had no chance of conceiving naturally. She was devastated, and walked out the hospital with a prescription of 6 months' worth of HRT drugs.

She started having acupuncture along with Chinese herbal tablets. The treatment plan was to nourishing blood and kidney yin, to strengthening spleen qi and kidney qi. Selected acupoints were: Baihui (DU 20), Neiguan (PC 6), Guanyuan (REN 3), Zigong (EX-CA1), Xuehai (SP10), Zusanli (St 36), Sanyinjiao (SP 6), Taixi (KI 3), Geshu (UB 17), Pishu (UB 20), Shenshu (UB 23); Patent herbs: Ba Zhen Yi Mu Wan (Eight Treasure Pill to Benefit Mothers) and Li Wei Di Huang Wan (Six Ingredient Pill with Rehmannia). She had also took my advice to follow a special fertility diet. Her period came back after 4 weeks of treatment, and her cycle returned to regularly 28 days since then. She requested another blood test to recheck her FSH level, but the consultant refused. She was advised to consider IVF with donor eggs instead. Nevertheless, she continued TCM treatment for another month while she was on the waiting list for donor eggs. She surprisingly fell pregnant naturally with twins, and gave birth to two healthy girls in 2008.

Endometriosis with POF

Clare, aged 34, had taken the oral contraceptive pill for 11 years before trying to conceive in 2004. Her menstrual cycle was between 25 to 46 days, it was always painful with heavy bleeding. She had blood tests in 2006 and discovered that she did not ovulate. She then tried clomid for 10 months (two courses) and one cycle of IUI with no success. She had a laparoscopy 3 months ago and severe endometriosis was detected with an ovarian cyst. She had surgery to remove the displaced endometrial tissues, and expected to be able to start IUI soon afterwards. But her period cycle had shortened to 19 to 25 days, and FSH level had elevated to 18.6 iu/l, with a low oestrogen (oestradiol) level of 78 pmol/l. The gynaecological consultant had to postpone her IUI and referred her to me.

My treatment plan was applying acupuncture weekly, with a selection of acupoints: Yintang (EX-HN3), Baihui (DU 20), Hegu (LI 4), Quchi (LI 11), Tianshu (ST 25), Guanyuan (REN 3), Guilai (ST 29), Diji (SP 8), Zusanli (ST 36), Sanyinjiao (SP 6), Taichong (LV 3); combined with patent herbs: Zhu Yun Wan (Support Pregnancy Pill), Tiao Jing Bu Xue Wan (Regulating Period and Tonifying Blood Pill) and Zuo Gui Wan (Restore the Left Kidney Pill). Her period cycle was regulated to 27 days with normal blood flow after 4 weeks of treatment. Day 4 blood test had revealed her FSH level had dropped to 10.2 iu/l and oestradiol had risen to 138pmol/l, and ultrasound scan showing ovulation had occurred. She continued acupuncture with herbal tablets for another 3 months, and fell pregnant. She had no complications during her pregnancy, and delivered a healthy baby girl.

POF due to stress

Lisa visited me for the first time when she was 40 years old, after she had one failed IVF attempt and one cancelled IVF cycle due to a poor response. She was extremely stressed, depressed and anxious, always feeling cold and tired, suffering from severe backache and shoulder pains. Her period cycle was between 21 to 28 days, with heavy bleeding and blood clots, pain and bad PMT.

Her condition was spleen qi and kidney yang deficiency, together with liver qi and blood stagnation. Acupuncture and Chinese herbs were given to harmonise liver qi and blood, replenish spleen and kidney, and warm up her uterus. Acupoints: Baihui (DU 20), Neiguan (PC 3), Shenmen (HT 7), Guanyuan (REN 3), Qihai (REN 6), Zusanli (ST 36), Taixi (KI 3), Shenshu (UB 23), Mingmen (DU 4). Patent herbs: Shi Quan Da Bu Wan (All Inclusive Great Tonifying Pill), Cong Rong Bu Shen Wan (Strengthening Kidney Pill with Cong Rong) or Nuan Gong Yun Zi Wan

(Warming Uterus and Conceiving Baby Pill). Her period cycle had reverted back to 28 days after 5 weeks of treatment, and she generally felt much better. Unfortunately, she had stopped treatment altogether since she was in a difficult situation. Sixteen months later, her FSH level elevated to 14.6 iu/l, and was told that it was unlikely she would ever conceive with her own eggs. However, she wanted to try one more attempt of IVF with her own eggs whilst waiting for donor eggs, and had requested combining with acupuncture for the first time. On this occasion, she responded incredibly well, produced eight follicles, had two embryos of grade one transferred, and successfully achieved a pregnancy. She finally gave birth to a healthy baby girl of 8lb 8oz before her 43rd birthday.

Conclusion

The most frustrated thing for women with POF is that they are not only unable to conceive naturally, but also can not embark on IVF with their own eggs until their FSH has dropped to within a normal range. They are very often advised to have IVF with donor eggs. Therefore, stress and anxiety is always the condition that needs to be treated first, and acupuncture is the best option for this.

TCM is the most effective and beneficial treatment for POF, which relies on precise diagnosis and differentiation, appropriate acupuncture and herbal prescription. However, we must individualise the treatment programme according to their conditions in order to achieve the best results.

To treat women with POF, the first and most important thing to do is nourishing kidney essence or kidney yin, tonifying qi and blood to regulate their period. When they restart menstruating regularly, the treatment principle should be altered according to their four different phases of menstrual cycle, the yin-yang pattern and the qi-blood transformation, in order to promote ovulation and support conception.

Once the women's ovarian function is restored, and FSH dropped to normal level, they generally have great chances of conceiving naturally if they continue TCM treatment, although IVF may be necessary for some of them with severe fertility issues. The gynaecologists often advise patients to stop taking any other medications including Chinese herbs whilst having IVF drugs. In these cases, I suggest that we should cooperate with the consultants, applying acupuncture only. However, we may need moderate some acupuncture points according to their IVF treatment protocols, in order to achieve the best possible outcome.

Biography

Li Qin Zhao graduated from the Henan TCM University in July 1985 after 5 years full time study, is one of the UK's leading TCM practitioner specialising with infertility and gynaecological health. She had practised TCM in the second TCM hospital of Luoyang city in China for 10 years, and was appointed as a consultant in 1992. She has been practising acupuncture and Chinese medicine in the UK since 1995 and founded her clinic in 1997. She was awarded an acupuncture practising privilege since 2003 by CARE Fertility and also working closely with some gynaecological consultants in the hospitals. She has been featured several times on the newspapers, magazines and on television. She has over 25 research papers were published on professional journals worldwide. She can be contacted at www.zhongjinguk.com or lqzhao@zhongjinguk.com.

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