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Cases Study on the Management of Diminished Ovarian Reserve (DOR) and Premature Ovarian Insufficiency (POI) with Traditional Chinese Medicine (TCM)

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Abstract

Diminished Ovarian Reserve (DOR) is one of the main causes of female infertility and is common in women under of 40s. The definition and diagnosis are pragmatic and the treatment in mainstream medicine is not promising as many of the sufferers have to choose IVF as the last resort. DOR could be the reduced ability of producing quality egg or the poor quality of eggs produced. Premature Ovarian Insufficiency (POI) belongs to its aggravate stage. Traditional Chinese medicine has long been employed in treating female infertility, and a large proportion of the cases in the records now could be classified as DOR or POI. Some clinical reports have demonstrated great potential in treating DOR & POI. The authors have treated many cases of DOR and POI, and great achievements have been recorded. The protocol used in the treatment is a whole system approach which combines acupuncture, Chinese herbal medicine and lifestyle advice into an organic composition to maximize the effects. The cases reported here are of good details and could demonstrate the application of the TCM diagnosis of syndrome pattern which logically leads to the whole-system treatment implementation.

Keywords: DOR, POI female infertility, TCM, Acupuncture, Case report, Whole-system TCM treatment.

Abbreviations: DOR-Diminished Ovarian Reserve, POI-Premature Ovarian Insufficiency, POF-Premature Ovarian Failure, TCM-Traditional Chinese Medicine, FSH-Follicle Stimulating Hormone, AMH-Anti Müllerian Hormone, AFC-Antral Follicle Count, CHM-Chinese Herbal Medicine.

Ovarian reserve refers to the potential capacity of ovaries to constantly generate eggs using their stored oocyte. The ovarian reservation declines in age in both quantity and quality. At the age of 40, it was estimated that the reservation of oocyte number has dropped more than half from the amount of total oocyte at birth. Constant monthly supply of quality eggs, which grow from oocyte, is an essential condition of fertility. Lack of egg or poor quality of egg are mostly classified as Diminished Ovarian Reserve (DOR) will cause difficulty in fertility. Diminished Ovarian Reserve (DOR) is a decrease in the ovary's ability to produce eggs in accordance to the age [1]. DOR might show no clinical symptom and sign at all in many women, only being picked up for their cause of infertility, while some others could show menstrual cycle change. Strictly, traditional medical methods could not identify the problem and the diagnosis could be reliable. The decline to follicular quality and quantity in the severe case could eventually become Premature Ovarian Failure (POF) which is recently changed to the name of premature ovarian insufficiency (POI) [2] The diagnosis [3] When a woman in her 40s or, even 30s begins to manifest an irregular periods, low menstrual bleeding, amenorrhea, infertility, it means her ovaries lose their normal reproductive capacity and ability of producing eggs, or the follicular quality decreases, resulting in irregular menstruation and endocrinal disorders, decreased the reproductive capacity, elevated FSH 11-40 U/L, and decreased estradiol levels. Premature ovarian insufficiency is a diseases that

affects the normal ovarian function under 40s. It is characterized by amenorrhea for more than 6 months, blood FSH > 25u/L, and reduced estradiol levels. Overall, there are 10% infertile women with DOR; 1-3% of infertile women with POI; 10-28% of patients with primary amenorrhea which are caused by POI; 4-18% of patients with secondary amenorrhea are caused by POI. [4] The incidence of premature ovarian insufficiency is closely related to age. 1% in these younger than 40 years and 0.1% in younger than 30 years. Diminished Ovarian Reserve (DOR) belongs to the early stage. It is possible to save the patient's reproductive function if an appropriate treatment is given. But POI refers to a more serious stage which the reproductive function has severely disrupted. DOR can be present a complexed picture in women who receiving ART or IVF treatment for their infertility [5]. Some [6] reported significant reduced success due to cancellation among DOR patients, while others [7] found that there is no significant difference between those of DOR and other groups. It is still a topic for further research at this stage Traditional Chinese Medicine (TCM) has been providing support for the DOR patients in various expectations, including those just wanted natural pregnancy, those planning and receiving ART treatment, and those who do not expect more children. Xu (2021) [8] has summarised the achievement in treating DOR with acupuncture, while the application of Chinese herbal medicine was analysed by Zhang et al, (2020) [9] Both of acupuncture and herbs demonstrated good outcomes. However, due to

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the difficulty in designing a combined acupuncture and herbal treatment clinical trial, the whole system TCM clinical evidence is not available yet. In the TCM perspective, women's life is divided into three major stages, the childhood, the reproductive age, and post menopause stage. The key driving force making this constant evolving is the kidney essence which produce a material named TianGui. The Tiangui makes the productive system, including the Chong and Ren Channel, and uterus to be ready. The decline of kidney essence started at 35 years, and a woman at age of 49, the Chong and Ren channel collapsed, due to the exhaustion of TianGui, then the menses stops.

This was described in the Internal Classics of Medicine [10]. This was extended to the understand of why some women lost their reproductive ability earlier than menopause time, as Wang (1602) stated If the TianGui is exhausted early, there will be no child at all. [11] In Chen's (1687) [12] Syndrome Differentiation, chapter 11, Female Condition-Blood Dryness. The pathology of early exhaustion, premature menopause, or loss function of pregnancy was explained. The key development was the kidney deficiency. However, the emptiness/dryness in kidney was considered just partial fact of all. The development of this exhaustion is due to the lack of supply of nutrients from heart, live and spleen systems. It might be a malnutrition, the body generates little blood to fill up the channels, neverminded the kidney; and on other hand, it was some blocked Qi which failed the blood to rich the kidney. [13]

The earliest formal record of exhaustion of female function in gynaecological practice was from Fu's Gynaecology [14], Chapter 28, Menses Disappear Earlier before Aged. The phenomenon was discussed, from Qi and blood emptiness, to Qi and blood stagnation. But overall, it is due to kidney-water drying up. After the biomedicine clearly defined DOR, many leading TCM gynaecologists in China started to rationale the ancient understanding in combination of current knowledge to some hypothesis of understanding and treatment of DOR. LUO YuanKai proposed the TianGui-Kidney-Chong/Ren model of female productive function control; while Xia Guicheng moderated it to a Brian/heart-Kidney-Womb model.

Later, Liu MinRu modified it to a Brian-Kidney-TianGui-Chong/Ren-Womb model and those proposals have great influence in the clinical practice. (Liu, 2021) [15] from TCM practice in Europe, He's clinical observation found that there is a mismatch between life expectation and physical status in female health. The average life expectation and work life in modern society is much longer than before, women keep active in all aspects until later 60s and their psychological age could be still in their 30-40, and keep sexually active. Due to the elevation in their social status, many women put career success at the priority and postpone their plan for children. As a result, when they thought they are ready for having children, it is very likely they missed the opportunity of pregnancy. The heavy commitment of multiple roles and multiple tasks could empty their female function much earlier but not realising that decline due to the fact they can still perform sex as they like. The lack of awareness lead to lack of care of their body, which made the damage unnoticed (He, 2021) [16].

Causes of DOR

Based on source from NICE, CDC, and professional associations, the cause of DOR is complex and the following are among the main discussions.

- Genetic factors
- Congenital enzyme defect
- Autoimmune damage
- Dysregulation of Gonadotropin secretion or Gonadotrophin functional disorder
- Physical or chemical damage
- Emotional disorders' affect
- Idiopathic factor's affect
- Changed of environment and life style

Diagnosis and evaluation on Ovarian reserve in modern medicine: (NICE, 2017)

The diagnosis is mainly based on the age-related ovarian functional tests in FSH, AMH and AFC. Some guidance does include other clinical diagnostic investigation but not commonly agreed. Clinical symptom is not so valuable except the concern of failed effort in gettingpregnancy.

FSH: Follicle Stimulative Hormone (FSH) exceeds 8.9 IU/L which should be adjusted according to the age of the patient, so an elevated FSH in young women often predicts DOR and low ovarian response.

AMH: Anti-Müllerian Hormone (AMH) of less than or equal to 5.4 pmol/l. AMH can be detected throughout the menstrual cycle which is related with the number of follicles in the ovary and the initial development of follicles, it can predict OR changes earlier and more accurately, and has unparalleled advantages in monitoring OR, diagnosing ovarian related diseases and predicting IVF successful rates.

AFC: Antral Follicle Count, a vaginal ultrasound can be used to determine the remaining eggs in a woman (< 3mm). AFC determines her future fertility or the storage function of her ovaries better than FSH. Other tests on OR.

TCM's perspective on DOR and POI

The Kidney Essence in TCM is the main driving force of female reproductive function, therefore the decline of Kidney Essence lead to the termination of productivity. In TCM from the earliest theoretical study, the Internal Classic (Ni, 1995) female reproductive life was divided into several 7 years circle. at the end of 5th circle (35 years) the turning point arrives, which means the body starts its downwards development, with the fundamental change happens in the Kidney (TCM organ system). The body is no longer produce more essence to fill up the Kidney, and the kidney essence is not full anymore. After another 7 year circle (42 years), the decline reach a critical level and fertility is seriously affected. When the 7th 7 year circle end, at age of 49, a woman's reproductive life reach to the end. The declining of Kidney essence is mirroring the ovarian reserve in modern term. And the empty of kidney essence is the direct mechanism of end of reproductivity, which is shared by the understanding of the exhaustion of ovary leading to menopause and infertility.

TCM Aetiology of DOR: Many factors could slow or accelerate the gradual emptying of kidney essence, the decrease of ovary reserve. Those could be the poor lifestyle, malnutrition, too much productive activities (too many too frequent pregnancies) and over consumption of some toxic material, i.e., alcohol. It could also be a result of poor Congenital Essence quality inherited from parents. In these cases, the female line in the family showed a trend of early menopause. And in modern life, the broad use of contraceptives, the chemotherapy, the exposure to many chemicals were considered by many to increase the risk of DOR as those chemicals could interrupt the normal regulation of the function, and lead to toxic damage. Most DOR cases in China are treated with Chinese Herbal Medicine (CHM), while most cases in UK are treated first with acupuncture because the patients were referred to acupuncturists while they engaged in IVF/ART treatment.

The author's personal approaches have been evolving from mainly CHM, or acupuncture to a holistic and comprehensive combination of CHM and acupuncture in the last 20 year when more clinical experience accumulated. Many patients came for the help for better chance of IVF, but the whole-system treatment worked well and they got pregnancy before they commencing the IVF. (Jiang & Meng, 2022) [17] From the perspective of Traditional Chinese medicine (TCM), DOR and POI belong to irregular menstruation, blood



dryness, amenorrhea, menopause or climacteric disorder, infertility, etc. The kidney governs the collection of Essence and reproduction. All of Thoroughfare Vessel (Chong), Conception Vessel (Ren) and Governor Vessel (Du) are originated from the uterus (Zigong). So kidney is closed related to ovarian function, leading the development of reproductive function.

Clinical manifestations

There are three main aspects on the clinical symptoms: Irregular menstruation/ Amenorrhea; Infertility Symptoms similar to Climacteric disorders. Such as: Shortened menstruation with less period flow at the early stage, irregular menstrual circles, amenorrhea and infertility later on; hot flushes, night sweats, headaches, dizziness, mood swings, irritability, fatigue, palpitations, inattention, vaginal dryness and lack of sexual desire etc.

Differentiation syndromes of TCM with herbal medicines to DOR and POI

Liver and kidney yin deficiency with blood stasis: Clinical symptoms: less menstrual flow, a few of drops to end, dark red or fresh blood; or delayed menstruation, or amenorrhea, or irregular menstruation or sudden amenorrhea; infertility, or multiple miscarriages, or amenorrhea occurred after a miscarriage; hot-flashes, insomnia or more dreams, dizziness and palpitation, aching back and weak knees; dry in the vagina with lower sexual drive, sexual pain or difficult. Red tongue with less coating, wiry-fine, wiry-rapid pulse
Principle of Treatment: to nourish liver and kidney to cultivate blood and activate stasis Herbal formula (s): Lyceum Fruit, Chrysanthemum and Rehmannia decoction, Angelica, Peony and Rehmannia Decoction, Two-Solstice decoction variation.

Spleen and kidney yang deficiency with blood stasis: Clinical symptoms: less menstruation and less amount of menstruation, light colour and sparse blood, delayed menstruation or amenorrhea, or sudden block of menstruation, infertility, or multiple miscarriages; puffy face and pale complexion, hot-flashes occasionally, aversion to cold, dark shadow around of eyes and mouths. Pale tongue with teeth marks, deep-fine pulse. Principle of Treatment: to strengthen kidney and reinforce spleen to build up qi and activate blood stasis Herbal formula (s): Fertility Pearl decoction, and regulating menstruation & promoting pregnancy decoction variation.

Liver qi stagnation and kidney essence deficiency: Clinical symptoms: depression and annoyed, upset easily and anxiety attacks; delayed or earlier of menstruation or a few of months of amenorrhea; or less blood until to end, infertility; amenorrhea triggered by emotional swings; poor spirit and fatigue, dizziness, insomnia and more dream; dry hair and skin. Dark red tongue with bruises at sides and white coating; wiry pulse. Principle of Treatment: to dredge liver qi and strengthen kidney to cultivate and activate blood Herbal formula (S) Rambling decoction and Enrich Water & Clear the Liver decoction variation.

Blood stasis and block in the uterus: Clinical symptoms: amenorrhea for a few of months, or sudden amenorrhea after a labour, a severe disease, or multiple miscarriages; dark complexion, poor spirit and lethargy, dizziness and palpitation, sore at limbs and pain joints, dry skin; pale tongue with white coating, deep-fine-sluggish pulse. Principle of Treatment: to cultivate blood and fill essence to activate blood and regulate menstruation Herbal formula (s): Ginseng Turtle Shell decoction and Drive out Stasis in the Mansion of Blood Decoctions variation. We should elect a particular prescription according to individual case with relevant pattern.

Acupuncture treatment on DOR and POI

Routine points:

Main point: Moxi at Ren 8 (Shenque), Ren 6 (Qihai), Ren4 (Guanyuan) / Ren3 (Zhongji), Ext (Zigong)/ St28 (Shuidao).

Assistant points: Du20 (Baihui), Du24 (Shenting), St8 (Touwei) Ki10 (Yingu), Ki7 (Fulu), Ki6 (Zhaohai), Ki3 (Taixi).

Back points: B123 (Shenshu), B120 (Pishu), B118 (Ganshu), B115 (Xinshu), Du3 (Yaoyangguan), Du4 (Mingmen).

Variated points:

Liver stagnation: Liv8 (Ququan), Liv3 (Taichong), Sj5 (Sanjiao), Gb41 (Zulinqi)

Spleen deficiency: Sp9 (Yinlingquan), Sp6 (Sanyinjiao), Sp3 (Taibai), St36 (Zusanli)

Heart fire: P6 (Neiguan), H7 (Shenmen), P7 (Daling), Li4 (Hegu)

Blood stasis: Sp10 (Xuehai), P3 (Quze), Sp6 (Sanyinjiao)

Acupuncture points prescription should be individualised, case on case based from above points groups.

Special acupuncture technologies-Eight Liao Points stimulation

(BL31-34): Du3 (Yaoyangguan) to Du4 (Mingmen) with a waving 100 times, then leaves at the location for a half hour. Two pairs among of the Baliao Points (B131-34): the ordinary needles are put two sides of two pairs of Baliao points (31-34) for keeping a half hours, About strengthening points should be done in the 2nd week of the menstrual circles if the patients have an irregular menstrual circles, even amenorrhea which is caused by anovulation. [18-20].

Cases study

Case1: the lady with POI is naturally conceived with TCM preparation (**Figure 1**) Mrs J W, 32 years old, a medical researcher. She has irregular menstruation for all of her life. She has to take oestrogen pills to makes her period regular. After her marriage, they plan to get pregnancy. But when she stopped oestrogen pill to prepare for pregnancy, her period disappeared for more than two years. Her test results showed that her oestrogen level was low (< 50) at a menopause level. So, she was diagnosed as Premature Ovarian Failure (POF in an old name) by her specialist gynaecologist. When she made her first visits in Dan's (first author) clinic, what she wanted was to get relaxed from her anxiety.

Due to information she received on traditional Chinese herbal medicine, she refused taking TCM herbs, receiving acupuncture only. As times goes and her mental status relaxed, she then decided to explore further with TCM pills which was eventually proven to be safe to her. She then decided to take the individualised herbal prescription along with acupuncture. The treatment course was planned for a calenda year (12 months). At the end of 11months, she has her menstrual circles several times and they are regular. At that points, both the practitioner and the patient consider she could conceive naturally. Then natural pregnancy was reported to the practitioner soon after. At the full term, she got her healthy baby girl. After that her regular menstrual circles was established again without treatment. Within two years, she informed the practitioner that another natural pregnancy and health child.

The details of the clinical record are summarized below:

Clinical findings:

- First visit main complaints: depressive mood, insomnia, nervousness, restlessness.
- TCM inspection record: pale complexion, pale tongue body with thin white coating, the pulse was weak in all portions.
- Initial treatment: acupuncture only. Acupuncture points are same as listed below for the long-term management.

Treatments repeat weekly for three months

Then she decided to try some safe herbs, in the form of pills which allow her to control the dosage. Afterwards, blood test finds that her oestrogen level increases to 65, and no damage to liver or kidney was reported. So she expects to try the best way in TCM. The herbal treatment was changed to full prescription in loose raw herbs following standard cooking procedure.



Figure 1: The lady with POI is naturally conceived with TCM preparation.

TCM Syndrome Pattern differentiation: Kidney Yang deficiency with Qi stagnation and blood stasis, Treating principle: Strengthen Qi and warm Yang, to remove Qi stagnation and blood stasis. Treatment detail: Acupuncture: Moxibustion at Ren8 (Shenque).

Needling: Du20 (Baihui), Du24 (Shenting), Ren4 (Guanyuan), Ren6 (Qihai), St29 (Guilai), Sp9 (Yinlingquan), Sp6 (Sanyinjiao), Ki 10 (Yingu), Ki3 (Taixi), Ki2 (Rangu), Sj5 (Waiguan), Gb41 (Zulinqi).

Herbal medicine prescription:

- Ai ye (*Artemisia Argyi* Levl et Vant) 10 grams,
- Xian mao (*Curculigo Orchioides* Gaetn.)10 g,
- Yin yang huo (*Epimedium Brevicornum* Maxim) 15-30g,
- He shou wu (*Polygonum Multiflorum* Thunb) 10g,
- Dang gui (*Angelica Sinensis* (Oliv.) Diels) 10g,
- Chi shao (*Paeonia Lactiflora* Pall.) 10g,
- Tu si zi (*Cuscuta Chinensis* Lam.)10g, Zi shi ying (Fluorite) 10g,
- Chuan xiong (*Ligusticum Chuanxion* Hort.)10g,
- Xiang fu (*Cyperus Rotundus* L.) 10g;
- Tao ren (*Prunus Persica* (L.) Batsch.) 10, Hong hua (*Carpesium Tinctorins* L.) 10 are added around of ovulation,
- Chai hu10, Wu yao10 are added before period.

A minor variation is made in each week according to her general condition and if period is coming.

Explanation and Discussion

- Ai ye (*Artemisia Argyi* Levl et Vant), Xian mao (*Curculigo Orchioides* Gaetn), Yin yang huo (*Epimedium Brevicornum* Maxim) and Tu si zi (*Cuscuta Chinensis* Lam) are warm and employed in group to strengthen kidney Yang;
- Dang gui (*Angelica Sinensis* (Oliv) Diels) and He shou wu (*Polygonum Multiflorum* Thunb)) are the ingredients nourish kidney Yin;
- Chi shao (*Paeonia Lactiflora* Pall) and Chuan xiong (*Ligusticum Chuanxion* Hort.) are used to promote blood flowing;
- Zi shi ying (Fluorite) promote the ovulation;
- Xiang fu (*Cyperus Rotundus* L) helps the flow of Qi to relieve stagnation in liver;
- Tao ren (*Prunus Persica* (L) Batsch) and Hong hua (*Carpesium Tinctorins* L) are added in the secondary week to emphasize the blood circulation to promote egg’s ejaculation, but stop to use after the third week;
- Chai hu (*Bupleurum Chinensis* DC) and Wu yao (*Lindera Aggregata* (Sims) Kostem) are added in last week of the month to warm and accelerate the flow of Qi in and out uterus.
- The adjusting according to menstruation circle was emphasised by many clinical reports as the status of Qi and blood in different phases of a month is changing according to the need of support egg and uterus.

- Her oestrogen level has increased to 165 after three months and she has her period every other month since. The total treatment course lasted 11 month.

Case 2: the lady with DOR is successfully pregnancy with IVF after TCM preparation since 3 times of failures of IVF Mrs A J, 37 years old, officer in London. She and her husband had tried a natural pregnancy for 10 years after they were marriage without a successful result, and also no success after 3 times of IVF were done in 2019, so they visited Dr Jiang for requiring TCM support. She got to TCM clinic when she just failed the 3rd of her IVF. Since then, she had her menstrual circles shorter, 21-25 days, but she could have it regularly.

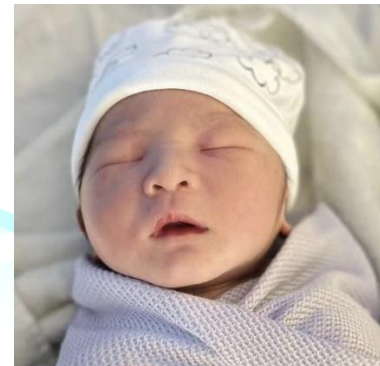


Figure 2: The lady with DOR is successfully pregnancy with IVF after TCM preparation.

Clinical findings: The first visit main complaints: very stress, restlessness, nervousness, difficult to fail asleep, less blood and lasted only 3 days in her menstruation with a shorter circles; loose bowel movements. Light red tongue with red at the tip and less white coating, wiry-fine pulse. Hormonal tests before IVF: AMH 2.6, AFC 1-5, FSH 6.3, and LH 2.9 Diagnosis of medicine: 1) Infertility caused by Diminished Ovarian Reserve, 2) Multiple failures of IVF. TCM Syndrome Pattern differentiation: Liver qi stagnation, liver and kidney yin deficiency Treating principle: dredge the stagnated liver qi and general qi, nourish the liver blood and kidney yin.

Treatment details: Acupuncture: Moxi at Ren8 (Shenque) **Needling:** Du20 (Baihui), Du24 (Shenting), St8 (Touwei), Ren6 (Qihai), Ren4 (Guanyuan), Ext (Zigong), Sj5 (Waiguan), Gb41 (Zulinqi), Li4 (Hegu), Liv3 (Taichong), Ki10 (Yingu), Ki6 (Zhaohai), Ki3 (Taixi), Sp9 (Yinlingquan), Sp6 (Sanyinjiao). Above acupuncture were done one session every two weeks.

Herbal medicine prescription:

- Chaihu(*RadixBupleuri*)10grams
- Zhiqiao (*Fructus Citri Aurantii*) 10g
- Shudihuang (*Radix Rhemanniae Glutinosae Praeparata*) 30g
- Danggui (*Radix Angelicae Sinensis*) 10g
- Chishao (*Radix Paeoniae Rubrae*) 10g
- Chuanxiong (*Radix Ligustici Wallichii*) 10g
- Tusizi (*Semen Cuscutae Chinensis*) 20g
- Gouqizi (*Fructus Lycii*) 10g
- Nvzhenzi (*Fructus Ligustri Lucidi*) 10g
- Hanliancao (*Herba Ecliptae Prostratae*) 10g
- Gancao (*Radix Glycyrrhizae Uralensis*) 5g.

Following her menstrual circle, Zishiying (Fluoritum), Huangbai (Cortex *Phellodendri*) and Zhimu (*Radix Anemarrhenae Asphodeloidis*) were added on the first two weeks; Xiangfu (*Rhizoma Cyperi Rotundi*), Guizhi (*Ramulus Cinnamomi Cassiae*), Suanzaoren (*Semen Zizyphi Spinosae*) were added on the late two weeks; at the first few of months, Maiya (*Fructus Hordei Vulgaris Germinantus*), Yizhiren (*Fructus Alpiniae Oxphyllae*) and Hezi (*Fructus Terminaliae Chebulae*) should be added on the first two weeks for pushing later her



ovulation to 14 days until she had a 28 days of menstrual circle. Above herbs were consisted as her key prescription, some variation were made according to her current state and followed with her menstruation. All of herbs in the prescription were boiled into herbal juice, she took them twice daily.

Explanation: Chaihu (Radix Bupleuri), Zhiqiao (Fructus Citri Aurantii) and Chishao (Radix Paeoniae Rubrae) dredge the stagnated the liver qi to be relaxation of her; Shudihuang (Radix Rhemanniae Glutinosae Praeparata) and Danggui (Radix Angelicae Sinensis) cultivate the blood and nourish the yin to build up the ovarian reservation; Tusizi (Semen Cuscutae Chinensis) and Gouqizi (Fructus Lycii) nourish the kidney yin also to promote the OR function; Nvzhenzi (Fructus Ligustri Lucidi) and Hanliancao (Herba Ecliptae Prostratae) not only nourish kidney yin, but also eliminate the empty heat to calm the mind down; Gancao (Radix Glycyrrhizae Uralensis) harmonizes the stomach and collects all of herbs effecting well together.

This prescription would regulate up her ovarian reserve function and help recovering her ovarian damage, so they would give a good enough support to her. Result: she would be regulated to her menstruation and increased the general wellbeing, so she went to another IVF after 6 months, she successfully got a healthy baby boy.

Conclusion

Traditional Chinese medicine (TCM), when applied in a whole system approach rather than simply acupuncture or herbal treatment only, has been used as the main treatment protocol by the authors for many years in helping patients of DOR and POI. The understanding and treatment are getting refined when more and more clinical experience is accumulated. This discussion should be considered in planning future treatment for practitioners.

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