

Traditional Chinese Medicine Strategy and Advantage in Recurrent Implantation Failure

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ABSTRACT

Recurrent Implantation failure (RIF) is a common condition. It affects about 10 % undergoing in assisted reproductive technologies (ART). Author from TCM philosophy discuss RIF's ethology, pathogenesis, and traditional Chinese medicine (TCM) treatment's strategy, principle, Chinese herbs formula, and acupuncture points. From TCM philosophy: the best way of the supporting RIF is: prevention is better than cure, about seeds theory. Good crop depending good quality seeds, good quality soil, and good climate. For supporting implantation successfully with Chinese herbs and acupuncture preparing good quality eggs (seeds); preparing good quality endometrium and endometrial receptivity (soil); preparing good body environment (body constitutions); author indicates: improve endometrial receptivity are key point of improve recurrent implantation failure. Author also explains the current situation of research about endometrial receptivity, about Western's Endometrial Receptivity Assay, how Western medicine approach to deal with RIF. Combination of western medicine, TCM support RIF with holistic way, concentrate to treat the roots causes rather than the symptoms, and treatment based individual, TCM works on stimulate body's own self-healing ability to improve and heal ovarian function, uterus function and improve eggs quality, and endometrial receptivity. So that TCM has advantage in support recurrent implantation failure, safe and no side effect. Author also shares three medical cases.

Keywords: Implantation, Infertility, In Vitro Fertilisation (IVF), Traditional Chinese Medicine, TCM, Acupuncture, Chinese Herbs.

INTRODUCTION

Recurrent implantation failure (RIF) is most commonly defined as the absence of a positive pregnancy test after three consecutive transfers of good quality embryos. It affects 10% of women undergoing ART treatment. It can be frustrating experience for clinicians and patients. there is a large amount of research shows having acupuncture and Chinese herbs before and during IVF can increase the chance of the IVF treatment being successful and having a successful pregnancy.

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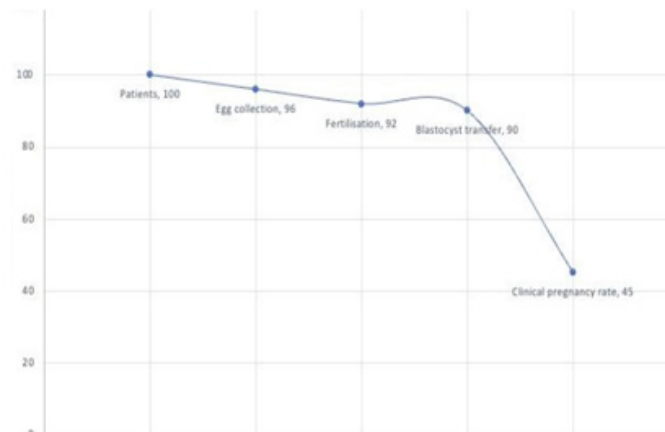
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IVF Steeplechase



The causes of RIF that can be have various factors, including maternal ages related [1] embryo quality, uterine factor, hormonal imbalance, genetic abnormalities, immunological factors, thrombophilia, underling medical conditions, etc. [2].

TCM Aetiology and Pathology

Traditional Chinese Medicine (TCM), including acupuncture and Chinese herbs, is an integrated systematic medical practice that has been predominantly used in China for over 2000 years.

In TCM, recurrent implantation failed can be attributed to various factors. Here are some of the possible reasons:

Deficiency of kidney Qi, Chong and Ren disharmony

➤ [Huangdi Neijing. Su Wen. Theory of Ancient Innocence] (Er Qi (at age of fourteenth years old,) the tian Gui arrives, the Ren channel is unblocked, the Tai chong channel is strong, and the menstrual event occur at the current time, so they can have child.....In Wuqi (thirty-five years old,) when Yang ming declines, the face become scorched, and the hair begins to fall. Six seven (forty- two years old,) three yang pulse is weakening in the upper part, the face is burnt, and the hair begins to turn white. Qiqi, (forty nine years old), Ren channel is weak, taichong pulse is weak, Tiangui is exhausted, and the tunnel is blocked, so the body declines, unable to breed.)

➤ [Su Wen. from the inner Canon of the Yellow Emperor]

At age of fourteenth years, the tian Gui begin to appear, the flow in the Ren Mai penetrates, the great Chong Mai is exuberant, and the menses descend in a timely manner. Therefore, they can have children.....

At quintuple seven, when the yang Ming channel declines,

the face start to desiccate and hair to come off....

At septuple seven, with deficiency in the ren channel and decline in the tai Chong channel, Deca runs out and menstruation stops, so the body declines, unable to breed.

In TCM, the Kidney is considered crucial for fertility. The kidney is origin of congenital constitution, kidney stores essential substances; kidney essence, Yin, Yang and Qi dominate reproductive system, "Tian Gui", often translated as "Heavenly Water," is associated with reproductive essence. Chong is the sea of blood; Ren is responsible for blood supply to the uterus, ovaries, and reproductive organs. The kidney deficiency can cause heart(brain)- kidney (Tian Gui)- ovaries reproductive axis out of balance, may lead to inadequate essence and blood, causing disharmony of Chong and Ren vessels, which result in a lack of nourishment for the reproductive organs, leading to RIF.

Balancing and nourishing the kidney energy, according to TCM principles, can positively impact fertility by supporting the body's vital energy and essence, supporting reproductive function.

Kidney Yang deficiency, spleen Qi deficiency with excessive Dampness

TCM principle: kidney Yang plays the very important role in reproduction, it can impact fertility by affecting the balance of Yin and Yang in the body, it affects promoting the power of reproductive function. In TCM, the Kidney is the foundation of the congenital constitution; the spleen is an acquired foundation, and the source of Qi and Blood; The spleen controls Blood. The spleen has the function to transport and transform nutrients. Kidney is the foundation of Chong, Ren. If Kidney and spleen Qi are sufficient, the Qi and blood in the body will be sufficient, the Qi and Blood of Bao Gong (ultras)

and Bao lu are also sufficient, Chong, Ren and meridian would be harmonized, if kidney Yang and spleen Qi are insufficient, it can impact nourishment and dysfunction of vital energy; Chong and Ren meridian will have insufficiency, uterus will have dysfunction. Spleen dysfunction can affect transportation of nutrients and fluid in the body, affect dampness retention in the body, can cause reproductive systems dysfunction, which can contribute to implantation failure.

Qi and Blood insufficiency, Chong and Ren disharmony

In TCM, Qi and blood are considered as fundamental elements that contribute to overall health and balance in the body. Qi represents the vital energy or life force, while blood refers to the nourishing substance that circulates through the body.

When there is Qi deficiency, the body may lack the necessary energy to support reproductive functions, affecting the overall vitality required for conception. Similarly, blood deficiency can result in insufficient nourishment to the reproductive organs, impacting their proper function.

In TCM, the concept is that a harmonious balance of Qi and blood is essential for optimal health, including fertility. Qi and blood deficiencies may disrupt this balance, affecting the menstrual cycle, ovulation, and the overall environment necessary for successful conception and pregnancy. Qi and Blood deficiency may disrupt Chong and Ren meridian's support, and disharmony, may potentially impact fertility by affecting the uterus blood circulation and endometrium function. That may impact recurrent implantation failures

Liver and kidney Yin deficiency, heat in the blood.

In TCM, the concept of "Kidney Yin" and "Liver Yin" deficiency contributing to infertility is rooted in the idea that these organs play crucial roles in the body's balance and reproductive health.

Kidney Yin Deficiency: The Kidney in TCM is considered the foundation of Yin and Yang, with Yin representing nourishing, cooling, and substance. Kidney Yin deficiency may lead to insufficient fluids and cooling energy in the body, affecting the reproductive system. **Liver Yin Deficiency:** The Liver in TCM is associated with the smooth flow of Qi (vital energy) and blood in the body. Liver Yin deficiency can cause disruptions in this flow, leading to stagnation or blockages. Kidney and liver Yin deficiency may affect heat in the body and blood; excessive heat may disturb the balance of proper function of organs, including uterus, may disturb uterus blood circulation, and result in a lack of proper nourishment for the uterus and affect implantation

Kidney deficiency and Blood stasis

In TCM, the concept of kidney deficiency and blood stasis impacting implantation is rooted in the belief that the kidneys play a vital role in reproduction. Kidney deficiency is thought to weaken the body's foundation, including the reproductive system. Blood stasis refers to the stagnation or poor circulation of blood, which can hinder the nourishment of reproductive organs including uterus. While Blood stasis affect poor circulation or stagnation in the uterus, affect uterus 's function and affect uterus implantation and maintain pregnancy. This is a quite common reason causing recurrent implantation failure. This can happen in the uterus, fallopian tubes, or ovaries.

Hypothalamic-pituitary-ovarian axis (HPO)

The hypothalamic-pituitary-ovarian (HPO) axis is a complex set of direct influences and feedback interactions between the hypothalamus, the pituitary gland, and the ovaries. It plays a crucial role in the regulation of the female reproductive system, including the menstrual cycle and the production of eggs and hormones.

Professor Luo yuan Kai first time rising of Kidney -Tian Gui (a term representing reproductive essence in women), Chong Ren -and - uterus axis in TCM philosophy.

TCM, the kidneys are considered fundamental to reproductive health. They are believed to store vital essence, including the Tian Gui, which plays a significant role in reproductive processes. When the kidney system is in balance, it is thought to nourish the Tian Gui, ensuring healthy menstrual cycles, fertility, and overall reproductive well-being. The harmonious interaction between the kidneys and the uterus is crucial for successful conception, pregnancy, and childbirth according to TCM principles. Kidney deficiency is the main reason causes recurrent implantation failure.

Professor Xia Gui Cheng rising heart (brain)-kidney (Tian Gui)-uterus TCM philosophy.

He inherited and developed TCM gynaecologic theory, he describes the regulation of menstruation cycle and reproductive rhythm in TCM genecology.

TCM philosophy helps to improve reproductive systems function and improve fertility abilities by regulating heart (brain)-kidney (Tian Gui)-uterus balance.

TCM treatment in recurrent implantation failures: TCM views the human body as a holistic system where balance and harmony are crucial for overall health, it emphasizes the interconnectedness of internal organs and also the idea

that the body's balance is influenced by environmental factors, seasons, and the elements. TCM strongly believes the syndrome differentiation and disease diagnosis are integral components of diagnosis and treatment. The combination of syndrome differentiation and disease diagnosis allows TCM practitioners to create a holistic understanding of a patient's condition, by integrating both perspectives. TCM aims to address not only the symptoms but also the underlying imbalances contributing to the illness. This approach often involves personalized treatment, according to women's menstrual cycles, regulate and harmonize body Yin, Yang, Qi and Blood, to improve balance of hormone's level, and improve reproductive systems' function.

Acupuncture treatment in recurrent implantation failures:

Acupuncture is believed by research to be beneficial for fertility conditions due to: it promotes relaxation, improves blood flow, regulates reproductive hormones, and improves reproductive organ's functions.

Acupuncture Local treatment: is believed to stimulate blood flow in specific area, affect the microcirculations, improve cellular metabolism, improve uterus, ovaries nutritional status, blood circulation, and improve eggs quality and endometrial receptivity.

Acupuncture holistic treatment: acupuncture can regulate hormone level, improve ovaries to increase and balance oestrogen and progestogens; regulate Hypothalamic-pituitary-ovarian axis (HPO), and regulate and harmonized body hormone's level.

TCM essence and advantage are: TCM view the body as a holistic system, where various organs and functions are interconnected.

Syndrome differentiation, diagnosis and treatment based on an overall analysis of the illness and the patient's condition.

The advantage of TCM allows effectively stimulating and balancing its self, so that be able to excite body own potential healing ability to achieve the best state of the body, which be able to protect and heal the body.

TCM treatment is comprehensive, multiple ways, and multiple targets. For some difficult diseases, especially for recurrent implantation failure, are effective.

TCM treatment basic principle in recurrent implantation failures

As the kidneys are considered fundamental to reproductive health. The TCM treatment principles are:

Replenishing kidney Qi and nourishing essence.

Regulate and balance heart, liver, spleen and kidney; regulate body Qi, Blood; Yin and Yang, regulate Chong Ren, improve reproductive systems function.

TCM treatment in recurrent implantation failure

Kidney Jing deficiency

Nourishing Yin and nourishing Blood, nourishing kidney essence.

Kidney Yang deficiency, spleen deficiency and dampness retention:

Warming up kidney Yang, strengthening the spleen Qi and remove dampness.

Kidney Yin deficiency. Liver stagnation turns into fire:

Nourishing the kidney and nourishing Yin, remove the stagnation Qi, and clearing the fire in the body.

Qi blood deficiency and Qi stagnation Blood stasis:

Replenishing Qi and nourishing Blood, activating Qi stagnation, activating blood circulation and removing Blood stasis.

Chinese herbs prescription in recurrent Implantations failure:

Nourishing kidney essence

Gui Shao Di Huang wan, Gui Shen Wan, Wu Zi Yan Zong Wan. Er Zhi Wan, Si Wu Tang, Wu Zi Yan Zong Wan, Liu Wei Di Huang wan.

Warming up kidney Yang

Jin Kui Shen Qi Pian, You Gui Wan, Er Xian Tang.

Nourishing Yin, Nourishing Blood:

Zhi Bo Di Huang Wan, Er Zi Wan, Yi Guan Jian, Si Wu tang, Ba Zhen Tang.

Nourishing Qi and nourishing Blood:

Yu Lin Zhu, Bu Zhong Yi Qi Tang, Fu Ke yang Rong Tang, Shi Quan Da Bu Tang.

Regulate liver Qi stagnation:

Jia Wei Xiao Yao Wan, Chai Hu Shu Gan San.

Activate blood and remove Blood stasis:

Tao Hong Si Wu tang, Xue Fu Zu Yu Tang.

Eliminate dampness and remove phlegm

Cang Fu Dao tan Tang, Er Chen Wan.

Acupuncture Points:**Kidney Jing deficiency:**

Tai Xi, (KI 3), San Yin Jiao (SP 6), Shen Shu (BL23), Zhong Liao (BL 33), Guan Yuan (RN3), Zhong Ji (RN 2), Bai Hui (DU 20).

Kidney Yang deficiency, spleen deficiency and dampness retention:

Pi Shu (BL19), Shen Shu (BL23), Ming men (DU4), San Yin Jiao (SP6), Yin Ling Quan, (SP9), Zu San Li (St36), Nei Guan (PC6), Tai Chong (LR3), Shen Que (RN18), Bai Hui (DU20).

Kidney and liver Yin deficiency. liver Qi stagnation turns into fire:

Tai Xi (KI 3), Ran Gu (KI 2), Xing Jian (LR 2), Qu Quan (LR 8), Yin Gu (KI10), He Gu (LI4), San Yin Jiao (SP6).

Qi blood deficiency and Qi stagnation Blood stasis:

Fei Shu (BL13), Pi Shu (BL20), Shen Shu (BL23), Tan Zhong (RN17), Zhong Wan (RN12), Qi Hai (RN4), Guan Yuan (RN3), Zi Gong (EX-CA1), Xue Hai (SP10), Zu San Li, (ST36), San Yin Jiao (SP6), Bai Hui (DU 20).

TCM treatment strategy in recurrent implantation failures

[Jingyue Quanshu] Volume 38: "Anyone who treats miscarriage must investigate the source of fetal growth and prepare for its damage." There is no way to protect your fetus. If he waits to leave, he may not be able to make it.

"The complete works of Jingyue Volum38: Any Treatment for miscarriage must find out the reason of causes, prevention is better than cure. That is the only way of preventing miscarriage. It would be too late, if waiting foetus lost.

Prevention is better than cure, is the best way to support recurrent implantation failure. It is very important principle: adequate preparation before start ART treatment.

Prevention is concrete embodiment of TCM philosophy: treats diseases before they happen' policy, it is an advantage of TCM philosophy in reproductive medicine field. It can compensate lack of treatment method for western medicine in reproductive systems. It is important measures for prevention and treatment of recurrent implantation failures [3].

Seeds theory

The necessary conditions of Plants growing:

Seeds (good quality seeds)

Soil (fertile soil)

Climate (sunshine, rain,)

The essential conditions for fertility

Good quality embryo;

Good quality of endometrial receptivity,

Embryos and endometrial receptivity synchronized development.

Major proposition are body Yin and Yang balanced and healthy.

The essential of preparing for implantation and maintain pregnant

1. Improve ovaries function, improve embryo's quality, for preparing good quality embryos;
2. Improve uterus internal environment, and endometrial receptivity, preparing good bedding for implantation.
3. Regulate and balance body Yin and Yang, preparing best body conditions for get pregnant and maintain healthy pregnancy. Including Western medicine reproductive systems, endocrine systems, immune systems, preparing body healthy, and balanced constitution, for implantation preparing best climate.

All the preparing works to chieve an best condition is replenish kidney Jing, kidney Qi, nourishing Chong and Ren vessel, improve ovaries and uterus functions, balance the hormones 's level, improve oocyte cells quality, improve endometrial receptivity, improve embryo's implantation rate.

The preparation works for recurrent implantation failures patients is important. Which can change their outcome of ART.

The timing of preparation is at least three months to six months or even more for complicated cases, depending on individuals.

Preparing good quality seeds for success in implantation with Chinese herbs

Chinese medicinal formulae:

Yang Jing Zhong Yu Tang, Gui Shen Wan, Wu Zi Yan Zong Wan.

Chinese medicinal formulae ingredient:

Shu Di Huang, Shan Zhu Yu, Shan Yao, Gou Qi zi, Tu Si Zi, Sang Shen Zi. (Nourishing kidney essence, replenish the innate foundation, improving eggs quality and preparing material basis.)

Er Xian Tang, Jin Kui Shen Qi wan, You Gui wan. (Warming up kidney Yang., improving eggs quality preparing for substance energy.)

Dang Gui, Chi Shao, Bai Shao, Dan Shen, Tao Ren, Ji Xue Teng. (Activate Blood circulation, remove Blood stasis, nourishing and supporting Chong Ren, and reproductive organs.)

Shan Yao, Fu Ling, Chen Pi, Bai Zhu, Gan Cao, (Strengthen the spleen and replenish Qi, nourishing acquired constitution, source of generating Qi and Blood.)

According to patients' symptoms add some herbs to smooth and regulate the liver Qi, such as Xiang Fu, Yu Jin to support Qi and Blood circulation.

Preparing good quality seeds for success in implantation with acupuncture

Acupuncture points: Bai Hui (DU20), Si Shen Cong (EX-HN1), Shen Ting (DU 24), Ben Shen (BG 13). (Calming and Tranquilizing, relaxation, regulation of Shen.)

Zhong Ji, (RN2), Guan Yuan, (RH3), Zi Gong, (EX-CA1), Gui lai (ST29), (Regulate Chong and Ren, improve ovaries and uterus's function.)

Gan Shu, (BL18), Pi Shu (BL20), Shen Shu (BL23), (Tai Xi (KI3), San Yin Jiao (SP6), Xue Hai (Sp 10). (Regulating liver, spleens, and kidney, strengthen the kidney essence, nourishing Blood, improving reproductive function and preparing material basis.)

Nei Guan (PC6), Zu San Li, (St 36), Zhong Wan (RH12), Tian Shu (St23). (Strengthen the spleen and replenish Qi, nourish acquired constitution, source of generating Qi and Blood.)

Eight meridians intersection points: it is the twelve regular meridians with eight extraordinary meridians intersection points, it governs whole body acupuncture points. It is effective to regulate Qi Blood's and their excess and deficiency. In acupuncture's practise, effectively using those points in acupuncture practise, regulate Qi and Blood; balance Yin and Yang; regulate and balance endocrine function, improve immune systems function. It can achieve more efficiency.

Auricular acupuncture: uterus, ovaries, endocrine, Shen men, kidney.

(Regulate autonomic nerve systems, endocrine systems, reproductive systems function.)

Moxibustion: Guan Yuan (RN3), Zhong Ji (RN2), Zigong (EX-CA1), Shen Que (RN18). (Improve uterus, ovaries blood circulation, improve uterus, ovaries nutritional status, and

internal environment.

(Improve autonomic nerve systems, endocrine systems, reproductive systems function.)

Electroacupuncture: Stimulate uterus, ovaries, Ba Liao (BL34-38) can increase pelvis' area Blood flow, stimulate pelvis sexual nerve, improve pelvis Blood supply, improve sexual organs' function.

Cupping Therapy: cupping on the Yao Yang Guan (DU3), Ba Liao (BL 28-34), can excite Yang Qi, improve reproductive systems function, cupping on Du and Bladder meridians, can improve Yang Qi circulation, regulate central nerve systems, autonomic nerve systems' functions, improve immune systems, endocrine systems function.

Fu's subcutaneous needling: apply on local point, can improve local Qi and Blood circulation, relieve blockage and pain, support ovulation, soften hardness and disperse Blood stasis, help dysmenorrhea, endometriosis, fibrosis, adenomyosis, etc.

Abdominal acupuncture therapy: Abdominal acupuncture is a form of acupuncture that involves inserting needles into the abdomen. It's a relatively modern acupuncture technique that was developed by Dr Zhiyun Bo in China in the 20th century. The idea is to stimulate points on the abdomen to treat various health conditions. Using this therapy works on regulate and balance of body Yin, Yang, Qi and Blood, improve reproductive function. It has macro-control effect.

Craniospinal theory and appliance:

1. Bai Hui (DU20), Feng Fu (DU16), Feng Chi (GB20), situated muscle group of suboccipital area. Those muscles tightness can affect the brain Blood supply, as 30% brain blood supply come from vertebral artery, release the tightness of suboccipital muscles, can effectively increase brain blood supply, by improve vertebral blood circulation.
2. Scalp fascia has plenty receptors, which connect cerebral and extracranial fascia. Stimulate the acupuncture points such as Bai Hui (DU20), and Si Shen Cong (EX-HN1), can be effective to stimulate cerebral and extracranial fascia and regulate cerebrum artery and vein's blood circulation, and increase brain's blood supply and function.
3. Du meridians are the governing meridian. It governs whole body Yang meridian. The bladder meridian connects all the internal organs in the body. It is governing all the internal organs' functions, and it is the area which

sympathetic nerve and parasympathetic nerves access. Ba liao (BL28-34) points and meridian, and Ba Liao (BL 28-34) is the parasympathetic nerve access, acupuncture stimulating those acupuncture points can effectively regulate, through fascia, autonomic nervous system, and regulate endocrine systems, immune systems, and reproductive systems, and improve their functions [4].

Preparing good quality soil for success in implantation with Chinese herbs

The best soil for plants is rich, loos, and suitable temperature.

Suitable embryo implantations of endometrial lining are complete function of endometrium;

Suitable temperature of endometrium, plenty blood supply, suitable sickness.

For someone suffering from RIF, RPL, it is very important to improve endometrium function, improve endometrial receptivity, to be prepared well before start to ART.

Treatment principle

Nourishing Yin and nourishing blood, nourishing kidney essence; strengthening the spleen and replenishing Qi.

Regulate Qi and activate Blood; eliminate phlegm, moisturizing the dryness; warming up kidney Yang and uterus; improve endometrium Qi and Blood circulation, improve endometrial receptivity, so as to improve implantation rate.

Treatment method: Chinese herbs, acupuncture, moxibustion, cupping therapy.

Preparing good climate for success in implantation with Chinese herbs:

Jingyue Complete Book. The woman returns. [Zi Si Lei] says: There is no fixed formula for the prescription of seeds. Each medicine is suitable for different people. Therefore, those who are cold should be warm, those who are hot should be cooled, those who are slippery should be astringent, and those who are deficient should be tonic to remove their bias. , then Yin and Yang are harmonious and living and transforming.

[The complete book of Jing Yue]: Dr Jing Yue Zhang explains the most important TCM philosophy: 'TCM treatment's principles for any infertility are: nothing more than balance Yin and Yang, harmonizes the body. So that for those who are cold should be warmed up; hot should be cooled down; slippery should be astringent; deficiency should be supplemented. Correct the out of balanced conditions, body Yin and Yang balanced, and then infertility would be cured.'

Preparing good climate for success in implantation should be done, according to individual to correct body out balanced of Yin and Yang, to regulate body's internal deferent systems, to improve internal organs functions; so as to have balanced body of Yin and Yang, harmonized body function, have body best healthy conditions, prepare good soil for implantation and fertility. Especially for those who suffer from immune systems disorder, PCOS, endometriosis, fibroids or for who suffer from endocrine disorder, autoimmune disorder diseases, improve their conditions before start to have fertility treatment.

Improve lifestyle, prepare ready of healthy conditions for implantation and fertility.

Such as stop smoking, less consume alcohol; no caffeine, no overweight; some exercises; try some relaxation exercises such as Yoga, Tai Ji, Qi gong etc.

Healthy diet, mediterranean diet: more fish, more vegetable, more fruits, nuts, etc.

Supplements: vitamin B, C, D, E; Omega 3, Q10, etc.

Improve endometrial receptivity is the key factor for treatment of recurrent implantation failure

Embryo impanation procedure after transfer:

1. The blastocyst begins to hatch out of its shell;
2. The blastocyst continues to hatch cut of its shell and begins to attach itself to the uterus;
3. The blastocyst attaches deeper into the uterus lining, beginning implantation.

Endometrial receptivity is the ability of the endometrium to successfully attach the blastocyst, to nourish it and keep it alive. This can only be achieved after the endometrium underwent a number of histological changes while also increasing in thickness. The impanation window is defined as that period when the uterus is receptive for implantation of free -lying blastocyst. The period of receptivity is short and results from the programmed sequence of action of oestrogen and progesterone on the endometrium. Normally during this period, endometrium's pattern, structural, and secreted proteins all have some changes.

Embryos only at this moment will be accepted, earlier or later in the impanation window period will not be accepted. Some researches show, the very important factors are endometrium and blastocyst synchronized development. Some research shows endometrial receptivity are damaged, accompanied consequent by interaction between blastocyst

and endometrium are in the two third of implantation failures [5].

The strategy of western medicine in recurrent implantation failure:

Addressing recurrent implantation failure in Western medicine involves a comprehensive approach. Some common strategies include assessing and treating underlying medical conditions, hormonal therapies, pre-implantation genetic testing, endometrial receptivity assay, and considering alternative procedures like endometrial scratching or immune therapies.

TCM treatment strategy to improve recurrent implantation failures

In TCM philosophy the kidneys are considered fundamental to reproductive health.

The TCM treatment principle in recurrent implantation failures:

Replenishing kidney Qi and nourishing essence, on the basis of the replenishing kidney, strengthen spleen, tonic Qi, regulate liver 's Qi, plus activate blood circulation, remove Blood stasis, eliminate dampness, resolve phlegm, warm up uterus, clear coldness.

Regulate and balance heart, liver, spleen and kidney together, regulate body Qi, Blood, Yin and Yang, regulate Chong Ren, improve reproductive systems function. So that can be effective to improve endometrial receptivity.

TCM treatment method

Acupuncture, moxibustion, cupping therapy, electroacupuncture.

The advantage of TCM treatment in recurrent implantation failures

The TCM philosophy is overall conception; treat disease and seek root cause and also symptoms; diagnosis and treatment basis on an overall analysis of the illness and the patient's condition; individual treatment. Those treatments are effective to improve body self-healing ability, improve and heal endometrial receptivity.

In Recent research

Combination of acupuncture and Chinese herbs can be effectively reducing recurrent implantation failures' patients' plasma D-dimer level, improve increased endometrial artery blood flow resistance;

Apply combination treatments to replenish kidney, activate

blood circulation herbs, and low molecular weight heparin, treating recurrent pregnancy loss patients with PTS, the outcome shows: patient's plasma D-dimer level improved, embryos survival rate improved.

The research show: activate P38 MAPK signal chain makes an important impact in embryo implantation, and JAK/STAT signal chain's expression and phosphorylation disorder close related with RIF (Dr Li Jiu).

In preparation of endometrial stage, using warming up kidney activating Blood circulation herbs plus electroacupuncture treatment, can improve RIF patient's implantation rate, and pregnancy rate (Dr Lin YI).

Combination of acupuncture and herbs can improve RIF patient's kidney deficiency symptoms, regulate oestrogen and progesterone level, improve embryo implantation, improve pregnancy outcome (Dr Yang Yuan).

Acupuncture can improve RIF patients' treatment cycle cancelation rate, and improve pregnancy rate (Xing Li Wei etc.)

The research show: combination of acupuncture and Chinese herbs treating RIF patients PLT lower before treatment; plasma D-dimer level lower than before treatment; serum P38 MAPK, JAK/STAT portion express lower than control group [6].

Under the guidance of 'Yu Pei Qi sun' theory, TCM compounds can improve the quality of sperm and eggs by anti-oxidative stress, improve mitochondrial function and reduce excessive apoptosis before IVF-ET, to obtain high -quality embryos; TCM compounds can also promote angiogenesis, anti-oxidative stress, regulate estragon and progesterone receptor content, regulate immunity to improve female endometrial receptivity to facilitate embryo implantation. It can also invigorate the spleen and kidney after transplantation and caring for the foetus to help implantation, as well as alleviate the anxiety of patients during transplantation [7].

TCM treatment is effective to improve endometrial receptivity by morphology, ultrasonics, hormone and receptors expressions, molecular biology, and gene expression.

1. It shows extensive pinocytosis expression.
2. Improve endometrium artery Blood flow, improve endometrium microcirculations.
3. Improve mitochondria function.
4. Increase estrogenic and progesterone's receptor's content and sensitivity.

5. Regulate correlator factor and gene express [8].

Improve eggs quality is another key factor for treatment of recurrent implantation failure

In 2019, the percentage of IVF treatments that resulted in a live birth was:

▶ 32% for women under 35

▶ 25% for women aged 35 to 37

▶ 19% for women aged 38 to 39

▶ 11% for women aged 40 to 42

▶ 5% for women aged 43 to 44

▶ 4% for women aged over 44

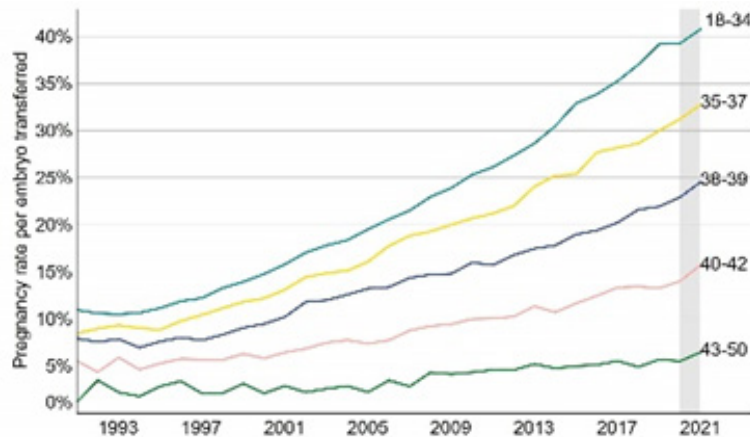


Figure 1. IVF pregnancy rate using fresh embryo transfers increased for all patient ages over the last 30 years [9].

The causes of egg's quality can have various factors, maternal age plays a crucial role in the quality of the embryos. When women get older, the quality of their eggs can decline, primarily due to changes in the chromosomes within the eggs. This decline in egg quality is associated with various biological factors: Chromosomal Abnormalities;

DNA Damage; Mitochondrial Dysfunction; Decreased Ovarian Reserve [10].

Western medicine strategy of egg quality may be considered are: Testing PGT-A; Hormonal Optimization; ovarian reserve testing, Immunological Factors; Genetic Counselling; Lifestyle Modifications: Supplements: ART.

Overall, women's eggs quality decrease, when women ages increase, is a nature irreversible biological process, even there are some new technologic methods in recent years.

TCM treatment principle of Improve eggs quality

1. Replenish kidney and nourish essence is the treatment principle, (to improve ovaries function and improve eggs quality.)
2. Strengthen spleen, tonify Qi, (nourish kidney essence by replenish spleen Qi, the source of Qi and Blood.)

3. Use some activating blood circulation herbs to remove Blood stasis. As some activating Blood herbs are effective on microcirculations, improve cell's metabolism, improve ovarian function, and improve eggs quality.

4. Holistic treatments to Jing, Qi, Shen, homological regulation, excite the body self-healing ability, to improve reproductive functions, improve egg quality.

Chinese herbs for improve egg quality:

Shu Di Huang, Shan Zhu Yu, Shan Yao, Huang Jing, Yin Yang Huo, Niu Xi, Gou Qi Zi, Nv Zhen Zi, Sang Shen Zi, Wu Wei Zi, Fu Pen Zi, Tu Si Zi.

Dang Gui, Bai Shao, Chuan Xiong, Dan Shen, Ji Xue Teng, Tao Ren, Hong Hua.

E Jiao, Zi He Che, Lu Jiao Jiao.

Dang Shen, Huang Qi, Fu Ling, Da Cao, Chai Ho, Xiang Fu, Gan Cao etc.

Acupuncture treatment to improve egg quality

Treatment method:

Acupuncture, electroacupuncture, Cupping therapy, moxibustion,

- ▶ Auricular acupuncture, Fu's substance needling, Abdomen acupuncture.

Dr Fang's regulate menstruation, promote ovulation thirteen acupuncture points

Acupuncture points group one:

- ▶ Bai Hui (DU20), Shen Ting (DU24), Ben Shen (GB13).
- ▶ (Calming and tranquilizing, regulating Shen.)
- ▶ Guan Yuan (RN4), Da He (KI12), Zi Gong (EX-CA1). (Regulating Chong Ren Meridian, regulate ovarian function.)
- ▶ Zhong Wan (RN 12), Tian Shu (ST 25), Zu San Li (ST 36), San Yin Jiao (SP6), Tai Chong (LR3). (Regulate spleen, stomach transformation's function, nourishing acquired foundation, which the source of Qi and Blood, beneficial Qi and Blood.)

Acupuncture point groups two:

- ▶ Shen Shu (BL23), Ci Liao (BL 32). (Replenish kidney Yin, nourishing, Blood, regulate autonomic nerve systems, for improve reproductive function preparing material basis.)

CASE STUDY

Case One

E, 41 years old, hair dresser. She has low AMH, suffers from insufficiency ovarian failure. Her period is 4-5/28 days. After she was 40 years old, her period lasts three days, lighter and pale colour. She has period pain, she has PMT symptoms three- five days before her period start. She felt irritable, mood swings, tired, anxiety, and tender breast. On her macroscopic: her both side of fallopian tubes were blocked, and there were some damaged. (She had D & C when she was 26 years old.) She had failed twice with IVF in the past. She had tried for family four years.

On the examination: Her Tongue was pale with white fur, pause deep, thin and weak, Chi was weak. Diagnosis in TCM: Kidney and Liver insufficiency, Qi and Blood insufficiency, Qi stagnation, Blood stasis, Chong Ren disharmonises.

TCM treatment principle: Replenish kidney and liver, tonic Qi and nourish Blood, smooth liver Qi stagnation, remove Blood stasis, nourish and regulate Chong and Ren meridians.

Chinese herbs formular: Yu Lin Zhu, Gui Shao Di Huang Wan, Jin Kui Shen Qi Pian, Tao Hong Si Wu Tang, Jia Wei Xiao Yao San. Acupuncture Points: Guan Yuan (RN 4), Zi Gong, (EX-CA1), San Yin Jiao (SP 6), Tai Chong (LR3), Xue Hai (SP10),

Bai Hui (DU 20), Shen Shu (BL 23).

After treatment in a few weeks, she was pregnant, she was very happy, as it was showing her fallopian tube was unblocked. But she was miscarriage again. A few weeks later, she started IVF, she was collected three eggs, only two of them fertilized, she was transferred the embryos, but it did not work. She stopped acupuncture treatment. A few months later, she came back, during this period, she went abroad and had an IVF, she only had one embryo, it did not work. She was prepared another IVF abroad in a few weeks' time, and asked acupuncture and herbs to prepare for that.

After treatment for her in the past, her general health was better, her BBT chart showed her hormone more balanced, her period flowing was better than before, and less painful, she general energy improved. Those indicated my treatment was correct. So, I carry on the treatment principle, used Shi Quan Da Bu tang to nourish her Qi and Blood, used You Gui Wan to warm up her kidney Yang, used Xue Fu Zhu Yu Tang To activate her Blood circulation and remove the Blood stasis. Acupuncture treatment strongly stimulated her general health and local appoints of ovarian and uterus, improved her ovaries and uterus function.

For acupuncture treatment, I used electroacupuncture on her Ba Liao (BL34) points, to strengthen Qi and Blood circulation for her ovaries and uterus. I have suggested she asked her consultant permission abroad, to take Chinese herbs during her IVF treatment. She got the permission.

She booked her return flight abroad, but her embryos matured three days earlier than before, and quality were much better than before, (Her husband said, acupuncture works! He did not believe that before.) She did the transfer, she had positive test result. She gave birth to a healthy baby girl. When her daughter three months old, she sent me her daughter's photo and a beautiful thanks' card.

When her daughter was three years old, she came back to acupuncture again, she told me that she was pregnant naturally, she asked acupuncture to support her pregnancy. When she pregnant thirty-three weeks, she had some problems with her pregnancy, with acupuncture's help, she had her health baby boy when she was about 40 weeks pregnancy. She sent photos and card to thank me again.

Case Two

L, 39 years old, a single lady wanting to have a child. She visited my clinic firstly on 16.06.2018. She said to me, 'I failed 8 ART, I wanted to be a mum since I was three years old. This was my last chance. I hope you could help me'. Her

period was 3-7/24-27; heavy, dark colour with clots and very painful. She failed 3 IUI, 3 IVF, 2 full donors' eggs and sperms IVF; her egg's quality was poor. The first and second IVF, she was collected 7 eggs, only 2 fertilized, the last IVF she had donated eggs and sperms. She would use donated eggs and sperms for next IVF soon. Her gynaecologist suggested good diet and lifestyle, and have acupuncture to prepare next IVF. She suffers from mild endometriosis; she had operation for that one year ago. She suffers from chronic diarrhoea, bloated tummy, lose stool every morning for many years. She has cold extremities, anaemia in the past. She often felt tired, she also suffers from fibromyalgia, chronic fatigue syndrome. She looks tired, pale face, pale and puff tongue with white fur, edge of her tongue with teeth marks, underneath tongue showed dark blood vassal. Her pause was weak, deep, short.

Differentiation of symptoms by TCM: spleen and kidney Yang deficient, liver Qi stagnation, Qi and Blood deficiency; Blood stasis, Chong and Ren vessel were deficiency and disharmony. TCM Treatment principle: Invigorate spleen Qi, boost kidney Yang, tonify Qi and nourishing Blood, and remove Blood stasis. Nourish and harmonize Chong and Ren Vessel.

She often felt exhausted, as her general Qi dysfunctions of descending and uprising, her Qi, Blood, Yin and Yang were disharmony, that is why she suffered from some physical problems and failure many times of ART. This is a very common reason for poor eggs quality, ovulation and implantation problems. I concentrate on improving her digestive systems function first, to invigorate spleen Qi, and warm up kidney yang with Chinese herbs and acupuncture: herbs: Shen Ling bai Zhu San, Bu Zhong Yi Qi tang, Ren Shen Yang Rong Tang, Jin Kui Shen Qi tang, Nuan Gong Yun Zi wan, Tao Hong Si Wu pian. Acupuncture points: I stimulated DU meridian Yao Shu (DU 2), Da Zhui (DU14), Bai hui (DU20), to improve her body Yang Qi, I worked on improving her body general Qi, Blood, Yin, Yang, nourish and harmonize Chong and Ren Vessel by stimulating Pi Shu (BL18), Shen Shu (BL23), Moxa Shen que, (RN18) Guan yuan (RN4), Zhong Ji (RN 3), Tian Shu (St 25), also used Zu San L (ST 36), San Yin Jiao (Sp 6), Yin ling Quan (Sp9).

At the meantime, I also work on her uterus, ovaries, improve her ovaries, uterus' function, and improve her endometrial receptivity. I gave her acupuncture once a week, I also suggested her do moxa at home, good diet and lifestyle. After a few of treatment, her bowel movement was much better, she did not have lose stool in the morning any more, her

general energy was much better, her body general aches and pains were less, her period last longer, fresher colour, not so heavy and clots. After a few weeks of treatment, she felt much better mentally and physically, she felt like a different person.

Her IVF started, she took drugs and waited for donor's eggs and sperms, she had constipation and headaches with side of effects of the drugs. Acupuncture helped to release those symptoms. She had 6 embryos; two embryos were transferred, she had a positive pregnancy test, I still gave her acupuncture until her 28 weeks of pregnancy. She had full Terms of pregnancy, and gave a birth to a healthy baby boy.

Case Three

Mrs S .H, 40 years old, suffered from premature ovarian failure and ultra- thin endometrial lining. She started anticipation drugs injection Depo-Provera from 17 years old. She stopped these drugs when she was 29 years old. Her menstruation stopped since. She started to see gynaecologist when she was about 36 years old as she wants to start her family. She was going to start IVF; she had still no period even with some different drugs. She was given different drugs, for months and months, she was even put on Viagra to see if that would work. But her endometrial lining was not thickening (below 5mm). Gynaecologist suggested that she should have acupuncture preparation for her IVF, and suggested that she come to my clinic. She has premenopausal symptoms: hot flushes; sweating in the night; insomnia; anxiety. (Tongue was small, red colour and less fur. Pauses: thin, weak, string.) Her macroscopic: fragmented endometrial biopsy showing some crush artefact. It shows glands of inactive pattern.

Differentiation of symptoms by TCM: Deficiency in both Liver and Kidney Yin. Treatment principle: Reinforcing kidney and liver, nourishing blood, improving blood circulation of ureters. Herbal medicine: Liu Wei Di Huang Wan, jia Wei Xiao Yao Wan, Ba Zhen Tang, Fuke Yang Rong Wan. (Above herbs use concentrated Chinese herbal powders, two times daily.) Acupuncture points: Tai Xi (Ki3), San Yin Jiao, (SP6), Tai Chong (LI3), He Gu (LR 4), Zu San Li (ST 36), Xue Hai (SP10), Gan Shu (BL18), Shen Shu (BL 23), Bai Hui DU20), Guan Yuan (RN4), Zhong Ji (RN3), Zi Gong (Ex-Cai 1).

After about ten weeks acupuncture and Chinese herbs treatment, she felt more relaxed, her sleep was improved, her general energy was much better, her period was started about 2-3 days, light period, menstrual cycle was about once a months. Her IVF treatment started abroad. Her endometrial

lining increased up to 6.5mm. She was transferred two embryos. She had a positive pregnancy test and had a scan when she was six and half weeks pregnant, her scan showed she was pregnant with twins. Then she started some bleeding. I prescribed some Chinese herbs prescription "An Tai Fang". Ingredient: Sang Ji Sheng 10g, Xu Duan 10 g, Tu Si Zi 20 g, Dang Shen 15g, Bai Zhu 10 g, Sheng Ma 6 g, Niv Zhen Zi 10 g, Han Lian Cao 10 g and Zhi Gan Cao 6g. After she took the herbs, her bleeding stopped. She had a scan later. The scan showed that there was one heartbeat. She lost one baby, and another one survived. She entered labour when she was 40 weeks pregnant. She had a healthy, good looking baby boy.

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