Polycystic Ovarian Syndrome part 2:
by Rona Wang

The essential principle in treating PCOS is to invigorate the Kidney and remove stasis. This means predominantly to enrich yin assisted by enriching yang to treat the root, and to activate the blood and remove blood stasis, phlegm and damp to treat the branch. Invigorating the Kidney and promoting Kidney function regulates reproductive function, ensuring menstrual regularity and the smooth opening and closing of the Chong and Ren channels and the Sea of Blood.

If Kidney yin is sufficient, then the tian kui or ‘heavenly waters’ (the substance necessary for the promotion of normal reproductive growth and development), the Chong and Ren and the Sea of Blood will be full of essence. If the Kidney yang is prosperous and can help the tian kui in the timely expulsion of the follicle from the ovary at mid-cycle, then the blood and qi circulation will be regular and smooth, water metabolism will be normal, and no blood stasis, phlegm or dampness can be produced. The reproductive system thus will have a balance between yin and yang. Once the Kidneys are strengthened then polycystic ovarian syndrome (PCOS) will be amenable to treatment.

Research in recent years shows that Kidney tonic herbs can improve the function of HCG/LH receptors inside the ovary, increase ovarian response to LH and simultaneously increase the sensitivity of pituitary receptors to LH/RH. Thus they improve the function of hypothalamus-pituitary-ovarian axis. PCOS results from the failure of ovarian follicles to mature; the immature follicles secrete androgens and there is stagnation of fire syndrome. Ovarian follicles may spontaneously shut down, and long-term failure of ovulation causes the ovarian casing to thicken so that even if ovarian follicles manage to occasionally mature they cannot be expelled. This makes the condition distinct from anovulation due to ovary hypofunction.

Western treatment of PCOS involves wedge resection or multiple punching using lasers to promote ovulation, whereas in traditional Chinese medicine we enrich the Kidney yin assisted by strengthening the Kidney yang to dispel stasis and promote the expulsion of the mature egg. Enriching the Kidney yin facilitates the development of ovarian follicles, while strengthening the yang and activating the blood promotes qi and blood circulation, not only promoting the expulsion of the mature follicle but also ensuring that the Kidney tonic herbs reach areas of pathological disturbance to soften the thickened ovarian casing. The ovary can then regain its normal functioning.

Commonly used herbs in treating PCOS.
Most of my patients are of the Kidney yin deficiency type, and I have observed that they often have accompanying chronic pharyngitis. However as some also have Kidney yang deficiency, it is important to treat the disease based on syndrome differentiation and an individual assessment of the relative degrees of yin and yang deficiency in each patient.

1. To enrich yin predominantly: Gui Ban (Plastrum Testudinis), Shu Di (Radix Rehmanniae), Zi He Che (Placenta Hominis), Nu Zhen Zi (Fructus Ligustri Lucidi), Han Lian Cao (Herba Ecliptae), Gou Qi Zi (Fructus Lycii), Huang Jing (Rhizoma Polygonati), Tu Si Zi (semen Cuscutae).

2. To enrich yang and qi and activate the blood to facilitate ovulation: Xian Ling Pi (Herba Epimedi), Suo Yang (Herba Cynomorii), Lu Jiao Pien (Comu cervi), Bu Gu Zhi (Fructus Psoraleae), Huang Qi (Radix Astragali seu Hedysari), Shan Yao (Rhizoma Dioscoreae) etc.

3. According to the diagnosis, some cases require additional methods of treatment: dispelling dampness and expelling water; softening hardness and dispelling nodules, removing heat and drying dampness. In this situation the following herbs are commonly used: Zhi Ban Xia (Rhizoma Pinelliae), Cang Zhu (Rhizoma Atractylodis), Bai Zhu (Phlomis Atractylodis Macrocephala), Dan Nan Xin (Arisaema cum Bile), Fu Ling (Poria), Wu Llu Tong (Fructus Liquidambaris), Zao Jiao Ci (Spina Gleditsiae), Zhe Bei Mu (Bulbus Fritillariae Thunbergii), Xi Ku Cao (Spica Prunellae), Shan Ci Gu (Bulbus Lpjigeniae Indicae) etc.

The use of herbs in supporting the phases of the menstrual cycle in PCOS patients.
In traditional Chinese medicine it is believed that changes through the menstrual cycle are a result of the inter-regulation and interaction of the Heart and Kidney (Brain - "tianzang", uterus - "baogong" - menstruation). This is roughly equivalent to the hypothalamus - pituitary - ovarian axis in Western medicine. The natural state of equilibrium of yin and yang is supported at each phase of the cycle.

1. The postmenstrual phase (5th to 10th day during the menstrual cycle). The treatment principle during this phase is to nourish the Kidney, enrich the blood, regulate and nourish the chong & ren. Commonly used herbs are as follows:

Shu Di (Radix Rehmanniae), Huang Jing (Rhizoma Polygonati), Nu Zhen Zi (Fructus Ligustri Lucidi), Han Lian Cao (Herba Ecliptae), He Shou Wu (Radix Polygoni Multiflori), Huang Qi (Radix Astragali seu Hedysari), Dang Gui (Radix Angelicae Sinensis), Bai Shao (Radix Paeoniae Alba), Tu Si Zi (semen Cuscutae), Gou Qi Zi (Fructus Lycii), Gui Ban (Plastrum Testudinis), Shan Yao (Rhizoma Dioscoreae), Zi He Che (Placenta Hominis), Ji Xue Tang (Gaulis Spatholobii), Chuan Xiong (Rhizoma Ligustici Chaunliangliscum), Xiang Fu (Rhizoma Cypen), etc.

2. The pre-ovulation phase (11th to 14th day during the menstrual cycle). The treatment principle during this phase is to add herbs that can enrich the yang and activate the blood to facilitate ovulation, on the ba-
sis of enriching the yin and blood. Commonly used herbs are as follows:
On the basis of original prescription, add one herb that can enrich yang or one herb that can enrich qi, such as Xian Ling Pi (Herba Epimedi) or Huang Qi (Radix Astragali seu Hedysari), two to three herbs that acti-vate blood, such as Chi Shao (Radix Paeoniae Rubra), Dan Shen (Radix Salviae Miltiorrhizae), Xiang Fu (Rhizoma Cyperi), Ze Lan (Herba Lycii), Zao Jiao Ci (Spina Gleditsiae), Ji Xue Teng (Caulis Spatholobi), etc.

3. Post-ovulation phase (15th to 24th day during the menstrual cycle). The treatment principle during this phase is to enrich both the Kidney yin and Kidney yang. Caution: because this treatment is stoking the fire in the kidney, it should search yang in yin & fire in water. No excess yang should be added otherwise the patient may have symptoms due to excess yang and heat, such as increased acne, a dry throat and mouth, and consumption of damage to the yin and blood, especially in those patients with a history of menstruation and metrorrhagia. Herbs that can be used:

On the basis of original prescription, add herbs that can enrich yang, like Guizhi (Ramulus Cinnamom), Zhifu (Radix Aconiti Asperata), Xiao-huxi (Fructus Foeniculi), xuyao (Radix Linderae), Aiye (Folium Ar-meniacis Argyi) etc, basically modified on formula Guifuzhidiwuan I prefer to use herbs like Xianlinpi (Herba Epimedi) Duzhong (Cortex Eucommiae) Tusz (Semem Cuscutae) chuanxu (Radix Dipsaci) Tupan (Fructus Rubi). For patients with an obesity stature, add two to three herbs that can enrich yang. For patients with a medium or skinny stature, add one herb that can enrich yang with a small quantity, for example, add three to six grams of Xianlinpi (Herba Epimedi) or use herbs with corporeal and blood components like Roucou (Herba Cistanches), Lujiaoxia (Cornu Cervi).

4. Premenstrual phase (15th to 28th day during the menstrual cycle): In this phase the uterus is replete to overflowing and there is a fullness of the sea of blood, so the treatment principle should be to support this trend by inducing and facilitating the menstrual function, and dredging the collaterals to guide the bleeding downward. Use herbs that can increase blood circulation and menstrual regulation, for example; Niuxi (Radix Achyranthes bidentata), Honghua (Flores Carthami), Taoren (Semem Persicae), Yimucao (Herba Leonuri), Liujing (Herba Artemisiae Anomaiae), Danzhen (Radix Salviae Miltiorrhizae), Zeran (Herba Lycii) etc. (if the treatment has worked and the patient wants to have a baby, then herbs that activate blood should not be used while other herbs that enrich both kidney yin and kidney yang are still in use).

Women with long-term amenorrhoea or scanty menstrual bleeding, a purple tongue without lustre, and other signs of blood stasis and obstruc-tion should be given herbs that remove blood stasis such as Sanleng (Radix Spargani), Ezhu (Rhizoma Curcumae), Zhikang (Radix el Rhizoma rhei) However these herbs should not be used long term or they may harm both qi and blood/yin. If patients have Liver depres-sion transforming into fire, or internal accumulation of dampness and heat, herbs such as Huangbai (Cortex Phellodendri), Shanzhizhi (Fructus Gardeniae), Zhebei (Bulbus Frisiliae Thunbergii), Dan Nan Xing (Arisaema cum Bile), Shichangpu (Rhizoma Acori Tatarinowii) should be added.

Bleeding
If a patient has functional uterine bleeding, whether it is flooding or dribbling, the treatment principle should be "if the condition is acute, treat the branch". Firstly, the bleeding should be stopped using herbs according to pattern differentiation, such as enrich the qi to stop bleeding, acti-vate the blood to stop bleeding, cool the blood to stop bleeding and astringe the fluid to stop bleeding. After the bleeding is stopped treatments should continue based on the pattern differentiation and on the phase of the cycle.

General reflections on PCOS
I used to believe that the cause of PCOS was internal obstruction due to the accumulation of phlegm and dampness, internal flooding of dampness and heat, or stasis of qi and blood. I used prescriptions such as Cang Fu Dao Tan Tan, Qi Gong Tan or Dan Zhi Xiao Yao Tan but the effects turned out to be unsatisfactory. On analysis, blood stagnation and stasis of phlegm and dampness are just the branches, whereas the root cause leading to this disease is Kidney deficiency. Deficiency of yin and blood fail to nourish the ovary while deficiency of yang impairs the expulsion of follicles from the ovary. However if one excessively enriches yang or excessively dries dampness, the body will become much hotter and drier internally and the deficiency of yin and blood will be aggravated. Thus I concluded that the treatment principle should be predominantly to enrich the Kidney yin, assisted by enriching yang and accompanied by activating the blood and promoting qi circulation, removing dampness and dispelling nodules.

In nourishing the yin, herbs should not be too greasy: Huangling (Rhizoma Polygonati) as a substitute of Shu di (Radix Rehmanniae), or if one really wants to use Shu di then herbs such as Chemp (Pericarpium Citri Reticulatae), Sharen (Fructus Amomi) should be added to avoid causing problems of the digestive tract. Sangjisheng (Herba Taxilli) can invigorate the Kidney and dispel dampness and Roucoungrong (Herba Cistanches) can enrich yang without causing internal dryness, while both Shanzha (Fructus crataeagi), Liujing (Herba Artemisiae Anomaiae) activate the blood and help the absorption of Chinese herbs.

The treatment of PCOS using a combination of traditional Chinese medicine and Western medicine.
Since the 1950s, clophenzine has been regarded as the most effective drug to facilitate ovulation. With use of clomiphene, the ovulation rate can reach 50%-90%, but the pregnancy rate is only 11% to 15%. However, if both Chinese herbs and clomiphene are combined the ovulation and pregnancy rates are both clearly increased. Clomiphene has an anti-oestrogenic effect and can impair endometrial growth which hinders implantation and reduces the pregnancy rate. However the combined use of Chinese herbs and clomiphene favors endometrial growth and increases ovulation and therefore the pregnancy rate. Clomiphene should not be used for more than three cycles however, as one of its side effects is the development of polycystic ovaries (PCO).

The induction of ovulation with acupuncture
The main acupoints used in the induction of ovulation are Zusanli BL-3, Zusanli ST-36, Shenmen BL-23, or the use of electro-acupuncture with intermittent stimulus for 30 minutes according to the patients' symptoms.

Serum hormone analysis in PCOS according to CM theory
1. High LH: Luteinising hormone promotes luteinisation of the follicle. Progesterone maintains an increased body temperature after ovulation. If the progesterone remains low after ovulation, feedback is sent to the pituitary to keep producing high levels of LH in order to promote the release of the egg. Since the normal elevation of temperature after ovulation represents sufficient yang, low progesterone and high LH represent a deficiency of yang.

2. If LH: FSH>3:1 then there is yin deficiency.
3. High DHEAS: DHEAS is dehydroepiandrosterone which is a male hormone, meaning that it relates to yang in TCM theory. It may arise from Liver yang deficiency heat; Liver excess heat, damp heat, and heat stagnation.

4. If E1→E2 there is always high testosterone which transforms to estrogen. In TCM theory, this is due to excess yang/heat. It may also cause acne or heavy bleeding. In chronic conditions it is due to yang deficiency/heat.

5. High glucose in the blood indicates Spleen deficiency with dampness.

6. High testosterone indicates yang-heat. The symptoms of acne, excessive body hair growth, bad temper, thirst and constipation due to liver heat (from excess heat or deficiency heat) are often seen in hormonal imbalances.

7. Fluctuations in prolactin levels indicate disruption of the smooth flow of Liver qi or stagnation of Liver qi.

8. Proper diet and exercise in PCOS

- Low calorie, low fat, low sugar and low carbohydrate diet, i.e. A low glycemic index diet is essential in the treatment of PCOS. This should be accompanied by regular exercise. Useful foods which can be taken as a porridge or a soup are as follows: Cucumber, strawberry, mango, prune, onion, carrot, celery, soybean, asparagus, corn, jelly fish, kelp, mushroom, agarics, fish, shrimp, bitter melon; and herbs such as Shan Zao, Sang Shen Zi, Da Zao, Shen Zha, Hu Hua and Chi Xiao Dou.

The TCM treatment of PCOS associated with type 2 diabetes mellitus and hyperlipidemia

These are secondary diseases related to PCOS which can in turn worsen PCOS. Modern Western medical research shows that PCOS does not only relate to hyperandrogenemia, but also to insulin resistance, and that hyperinsulinemia is in fact one of the main characteristics of the condition. Clinically, hyperinsulinemia in PCOS patients can aggravate hyperandrogenemia, and vice versa, forming a vicious cycle. So the pathogenesis of hyperandrogenemia and hyperinsulinemia are still unknown, but a familial connection has been noted which indicates that PCOS may be connected with genetic factors. Until now almost all analyses on family trees reveal that the genetic mode of PCOS is autosomal dominant inheritance, with both hyperandrogenemia and hyperinsulinemia as hereditary characteristics.

The TCM treatment of hyperinsulinemia and hyperlipidemia is primarily to enrich both the Liver and Kidney, strengthening spleen qi and promote qi circulation, relieve depression, dispel phlegm and activating the blood.

The pathogenesis of PCOS with type 2 diabetes mellitus and hyperlipidemia in TCM

Natural tendency to gain weight, the over-eating of fatty and sweet food, prolonged sitting without movement and emotional disorders are major causes of diabetes mellitus at the early stage. The over-consumption of fatty, rich and sweet food is hard to digest, resulting in transformation to turbid fluid and the accumulation of dampness. This results in weight gain and obesity. In "strange diseases" of Liang Dan Di Nei Jing Su Wen (Simple Questions), it says, "...there are some patients who feel sweet in their mouth...this is because of the overflow of five qi, and the disease is named pidan ("pidan"-persistent loss of spleen). Patients with this disease eat too much fatty and sweet food, fatty food causes internal heat while the body stores fat and causes abdominal fullness. So the qi moves upward and overflows, and the disease transforms into diabetes." Prolonged sitting without movement tends to cause stagnation in the Spleen and Stomach, slowing the functions of digestion and absorption, which results in the accumulation of phlegm and dampness. Genetic factors relate Kidney deficiency while emotional stress/imbalance is an important inducing factor.

Chinese Medicine treatment based on syndrome differentiation

1. Kidney yang and yang deficiency, Spleen qi deficiency with blood stasis.

In the initial stages there is usually Spleen and Kidney deficiency with blood stagnation. The main symptoms are obesity, fatigue and weakness, edema and cold in the limbs, poor appetite and loose stool, frequent urination, lower back pain, irregular menstruation or amenorrhea, and failed to be pregnant after long period of marriage, tinnitus, insomnia, swollen or light purple tongue with tooth marks and a thin, white coating, thread and weak pulse.

Treatment principle: invigorate spleen & kidney qi, reinforce kidney yang and removing blood stasis.

Prescription: Revised "Wu Zi Yan Zong Tang", "Aijun Tang", "Tai Hong Si Wu Tang".

Commonly used herbs: Tu Si Zi (Cuscutae Semen), Wu Wei Zi (Schisandrae Fructus), Gou Qi Zi (Lycii Fructus), Nu Zhen Zi (Ligustri Lucidi Fructus), Che Qian Zi (Plantaginis Semen), Fu Pung Zi (Fructus Rubi), Huangqin (Rhzima Polgonati) Xu Duan (Dipscpi Radix), Dang Guo (Eucommiae Cortex), Huang Qi (Astragalus Radix), Dan Shen (Codonopsis Radix), Fuling (Poria), Gancao (Radix glycyrrhizae), Dang Gui (Angelicae Sinensis Radix), Bai Shao (Paeoniae Radix alba), Sha Zha (Craetau), Chai Hu (Bupleuri Radix), Chuan Xiong (Chuxiang), Rhizoma, Hong Hua (Carthami Flos)etc.

Acupoints: Mingmen DU-4, Tai xi KID-3, Guanyuan RE-4, Shenshu BL-23, Yinglingquan SP-9, Fenglong ST-40, Diji SP-8, Zhongwan RE-12, Zhongji RE-3, Neiguan P-6, Zusanli ST-36, Zihai LIV-13, Qimen LV-14, etc. Moxa is applied where necessary.

2. Yin deficiency accompanied by qi stagnation and blood stasis. The main symptoms are fatigue and weakness, dry mouth and thirst especially at night, bilateral hypochondria distending pain, inflamed nose, and dry tongue, yellowish, slightly red tongue, thin and white tongue fur, wi and fine pulse.

Treatment principle: nourish both the Liver and Kidney yin, smooth qi circulation and soothe the Liver, and disperse stasis.

Prescription: Revised Liu Wei Di Huang Wan, Er Zhi Wan, Zuo Gui Wan plus Chai Hu Shu Gan San, etc.

Herbs usually used: Shu Di (Radix Rehmanniae) with Chen Pi (Pericarpium Citri Reticulatae) or Sha Ren (Amomum villosum Lour) to decrease its greasy nature, Huang Jing (Rhizoma Polgonati), Gui Ban, (Piastrum Traustudinii), Bie Jia (Carapax Trionycis), Nu Zhen Zi (Fructus Ligustri Lucidi), Han Lian Cao (Herba Ecliptae), Chai Hu (Radix Bupleuri), Bai Shao (Paeoniae Alba), Shan Yao (Rhizoma Dioscoreae), Tu Si Zi (Semen Cuscutae), Gou Qi Zi (Fructus Lycii), Zhi Shi (Fructus Gardeniae), Chuan Xiong (Rhizoma Liguisti Chuanxiong), Xiang Fu (Rhizoma Coryi), Gan Cao (Radix Glycyrrhizae).

Acupoints: Taixi KID-3, Sanyinyao SP-6, Taichong LIV-3, Xuehai SP-10.
3. Liver qi depression with damp-heat stagnation.

The main symptoms are obesity, desire to vomit due to excess phlegm or abdominal stiffness and fullness, bitter mouth and dry throat, vexation, hard and dry stool or uncomfortable defecation, irregular menstruation and/or dysmenorrhea with sticky, dark brown blood, slightly red tongue, white/greasy or thick/greasy or yellow/tongue greasy coating, wiry and slippery pulse.

Treatment principle: Regulate Liver qi, dispel phlegm and dampness, or clear heat and remove phlegm.

Prescription: Er Chen Wan, Yue Ju Wan, or revised Dan Zhi Xiao Yao Wan.

Commonly used herbs: Gang Zhu (Rhizoma Atractylodis), Shen Qu (Massa Fermentata), Ban Xia (Rhizoma Pinelliae), Pei Lan (Herba Eupatorii), Fu Ling (Poria), Shan Yao (Rhizoma Dioscoreae), Bai Zhu (Rhizoma Atractylodis macrocephala), Chen Pi (Pericarpium Citri Reticulatae), Bai Dou Kou (Semen Dolichoris Album), Zhi Qiao (Fructus Aurantii), Xiang Fu (Rhizoma Cyperi), Chuan Xiong (Rhizoma Fugustici Chuanxiong). If there is accumulation of dampness and heat, add Huang Bai (Cortex Phellodendri), Che Qian Zi (Semen Plantae), Zhi Zi (Fructus Gardeniae), Mu Dan Pi (Cortex Moutan Radicis).

Acupoints: Qimen LIV-14, Taichong LIV-3, Xuehai SP-10, Yinlingquan SP-9, Zhangmen LIV-13, Jianshi P-5, Fenglong ST-40, Zhangwan REN-12, Neiguan P-6, Pishu BL-20, Ganshu BL-18, Weishu BL-21.

Chinese herbs that can lower the plasma lipid level and aid in weight loss

Herbs which lower plasma lipid levels: Dong Chong Xia Cao (Cordyceps), Zhe Xie (Rhizoma Alismatis), Dan Shen (Radix Salviae Miltiorrhizeae), Da Huang (Radix et Rhizoma Rhei), Shan Zhe (Fructus Crataegi), Hong Hua (Flores Carthami), Ju Hua (Flores chrysanthemi), Jue Min Zi (Semen Cassiae), He Shou Wu (Radix polygoni Multiflor), Gan Cao (Radix Glycyrrhizeae), Fu Ling (Poria), Chai Hu (Radix bupleuri), Shan Yao (Rhizoma Dioscoreae), Chen Pi (Pericarpium Citri Reticulatae), Jiao Gu Lan (Herba Gynostemmaatis), Sang Ye (Folium Mori), Yin Chen (Herba Artemisiae Scopariae), Dan Gu (Angelicae Sinensis Radix), Ge Gen (Radix Puerariae), He Ye (Folium Nelumbinis).

Herbs that help to lose weight: Dong Gui (Radix Angelicae Sinensis), Shan Zha (Fructus Crataegi), Yi Mi (Semen Coicis), Jue Ming Zi (Semen Cassiae), He Ye (Folium Nelumbinis), Zhe Bei Mu (Bulbus Frillariae Thumbergii), plus Wu Long tea.


Conclusion

It is important to treat PCOS before the development of secondary diseases such as diabetes and hyperlipidemia which are much more difficult clinically. If one adheres to the therapeutic principle of treatment according to the pattern differentiation with the judicious addition of blood moving herbs then the best results will be obtained.