# Premature Ovarian Failure & AoAb Anti-ovarian Antibodies

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## abstracted & translated by Bob Flaws, L.Ac.

On pages 53-54 of issue 9, 2009 of *Xin Zhong Yi (New Chinese Medicine)*, Cao Huai-ning published an article titled, "Clinical Research Assessing the Impact of Er Zhi Di Huang Tang on Hormone Levels & Anti-ovarian Antibodies in Patients with Premature Ovarian Failure." A summary of this article is presented below.

### **Cohort description:**

Altogether, 60 cases of POF were enrolled in this two-wing comparison study. These 60 cases were randomly divided into two groups, a treatment group of 36 cases and a comparison group of 24 cases. All these women were 23-40 years of age and their disease course had lasted from four months to six years. All met standard Western medical criteria (described in detail in the study) for a diagnosis of POF. In the treatment group, 20 cases were positive for anti-ovarian antibodies. In the comparison group, 14 cases were positive. In terms of symptoms, disease course, and age, there were no significant statistical differences in these two groups ( $P \ge 0.05$ ). Thus they were considered comparable for the purposes of this study.

#### **Treatment method:**

All members of the treatment group were administered Er Zhi Di Huang Tang (Two Ultimates Rehmannia Decoction) as follows:

Nu Zhen Zi (Fructus Ligustri Lucidi)

Mo Han Lian (Herba Ecliptae)

Sheng Di Huang (uncooked Radix Rehmanniae), 30g each

Tu Si Zi (Semen Cuscutae)

Gou Qi Zi (Fructus Lycii)

Huang Jing (Rhizoma Polygonati)

Chuan Xiong (Rhizoma Chuanxiong)

Hong Hua (Flos Carthami), 10g each

powdered Zi He Che (Placenta Hominis), 3g, mixed into the final decoction

Dang Gui (Radix Angelicae Sinensis), 15g

If there was heart vexation and easy anger, 10 grams of Zhi Zi (Fructus Gardeniae) and 15 grams of Bai Wei (Radix Cynaqnchi Atrati) were added.

If there were hot flashes and sweating, 10 grams of Zhi Mu (Rhizoma Anemarrhenae) and 15 grams of Fu Xiao Mai (Fructus Levis Tritici) were added.

If there was impaired memory and insomnia, 20 grams each of Zi Bei Chi (Concha Mauritiae/Cypreae) and stir-fried Suan Zao Ren (Semen Zizyphi Spinosae) were added.

If the vaginal tract was dry and astringed, 10 grams each of uncooked Gui Ban (Plastrum Testudinis) and Mai Men Dong (Tuber Ophiopogonis) were added.

If there was low back and knee soreness and limpness, 10 grams each of Du Zhong (Cortex Eucommiae) and Xu Duan (Radix Dipsaci) were added.

If there was dizziness and tinnitus, 10 grams each of Tian Ma (Rhizoma Gastrodiae) and Ze Xie (Rhizoma Alismatis) were added.

If there were heart palpitations and chest oppression, 10 grams of Yuan Zhi (Radix Polygalae) and 30 grams of Dan Shen (Radix Salviae Miltiorrhizae) were added.

If there was anxiety and depression, 10 grams of Yu Jin (Tuber Curcumae) and 30 grams of He Huan Pi (Cortex Albiziae) were added.

One packet of the above medicinals were decocted in water two times and 150 milliliters of the resulting medicinal liquid was administered BID, morning and evening.

All members of the comparison group were treated with hormone therapy. This consisted of one milligram of orally administered estradiol valerate per day for a continuous 21 days. During the last five days of this time, 10 milligrams of progestin were also administered per day. Then these medicines were stopped for 3-7 days during menstruation. This same regime was then repeated. All patients in this group who had tested positive for anti-ovarian antibodies were also prescribed five milligrams of prednisone BID.

One course of treatment for both groups consisted of three months of the above described therapies.

### Study outcomes:

Marked effect was defined as re-establishment of a normal menstrual cycle after treatment for three successive months, basic disappearance or marked improvement in clinical symptoms, and basic normalization of estradiol (E2), follicle-stimulating hormone (FSH), and luteinizing hormone (LH). Improvement was defined as return of menstruation after treatment but the menses were scanty. In addition, symptoms were less than before and R2, FSH, and LH levels were better than before treatment. No effect meant that there was no menstrual cycle after treatment and E2, FSH, and LH had not improved. The following table shows the outcomes of the two groups based on these criteria.

Group	Number	Marked effect	Improvement	No effect	Total effect.
Treatment	36	21	8	7	80.56%
Comparison	24	13	6	5	79.17%

Hence there was no marked difference in overall therapeutic effect between the two groups (P > 0.05). Mean changes in serum E2, FSH, and LH from before to after treatment were also essentially the same between both groups (P  $\geq$  0.05). However, 17 out of the 20 cases who had tested positive for AoAb antibodies in the treatment group turned negative, for a conversion rate of 85.00%. Only seven of the 14 cases in the comparison group turned negative, for a comparison rate of 50.00%. (P  $\geq$  0.05) Thus the Chinese medical protocol

was more effective than the Western drug treatment for converting AoAb antibodies from positive to negative. In addition, the following table shows that, in terms of symptom relief, the Chinese medical protocol was more effective than the Western drug therapy ( $P \ge 0.05$ ).

	i iliedicai piot	the Chinese medical protocol was more effective than the Western drug therapy (P ≥ 0.05).										
	Treatment group			Compariso n group								
Symptoms	Before Tx	After Tx	Percentag e Improve- ment	Before Tx	After Tx	Percentag e Improve- ment						
Hot flahses & sweating	30	8	73.33	20	10	50.00						
Vexation, agitation, easy anger	27	5	81.48	18	8	55.56						
Vaginal tract dryness & astringenc y	13	6	53.85	9	5	44.44						
Low back & knee soreness & limpness	10	3	70.00	7	4	42.86						
Dizziness & tinnitus	9	2	77.78	5	3	40.00						
Impaired memory & insomnia	6	2	66.67	3	2	33.33						
Heart palpitation s & chest oppression	4	1	75.00	2	1	50.00						
Anxiety & depression	3	1	66.67	2	1	50.00						

## **Discussion:**

According to Dr. Cao, POF corresponds to the traditional Chinese disease categories of menstrual block, infertility, and blood desiccation. The *Nei Jing (Inner Classic)* says: "[When] the tian kui [is] exhausted, the earth passageways no [longer] flow freely." In this case, "tian kui" refers to kidney water or yin, and the "earth passageways" refers to the channels and vessels linked to the uterus. Therefore, Dr, Cao believes that kidney yin insufficiency and

tian kui depletion and exhaustion are the main disease mechanisms of POF. For this, she posits the treatment principles of enriching the kidneys and fostering essence, supplementing and boosting the tian kui, regulating and disciplining the chong and ren vessels.

Within Er Zhi Di Huang Tang, Nu Zhen Zi and Mo Han Lian make up Er Zhi Wan (Two Ultimates Pill). Their effect is to supplement the kidneys, nourish the liver, and boost the essence. Sheng Di Huang and Huang Jing enrich kidney water and boost true yin, foster the essence marrow and engender essence blood. Zi He Che is a "bloody, meaty natured substance" which can, therefore, greatly supplement the original qi. Tu Si Zi and Gou Qi Zi boost the kidneys and nourish the liver. Dang Gui, Chuan Xiong, and Hong Hua quicken the blood and free the flow of the network vessels. When all these medicinals are used together, they promote kidney water's obtaining supplementation, the tian kui's fullness and exuberance, and the chong and ren's regulation and harmony. Hence all the symptoms automatically disappear. In addition, pharmacologic research has shown that kidney-supplementing and blood-quickening medicinals can regulate immunity and slow the decline of reproductive function as well as promoting the return of normal ovarian function. Animals studies have also shown that kidney-supplementing medicinals can increase the presence of ovarian LH and human chorionic gonadotropin (HCG) receptors.

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