

## **Ovulation Following Combined Therapy With Wen-Jing-Tang and Clomiphene Citrate Therapy in Anovulatory Women**

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**Abstract:** The effect of combined therapy with Wen-Jing-Tang and clomiphene citrate on anovulation was studied in 16 infertile patients who did not respond to clomiphene citrate alone. Wen-Jing-Tang was given at a dose of 5 g a day every day from day 2 of the menstrual cycles and clomiphene citrate was given at 150 mg day for 5 days from day 5 of the cycle. Ovulation occurred in 43.8% of the patients and 48.6% of the cycles. No case of ovarian hyperstimulation syndrome or pregnancy were observed. These results suggest that the combined therapy with Wen-Jing-Tang and clomiphene citrate should be used before therapy with human menopausal gonadotropin .

Addition of Wen-Jing-Tang (Japanese name, Unkeito) to the perfusion medium of rat mediobasal hypothalamus in vitro is reported to increase LH-RH release. Clomiphene citrate (clomiphene) is also known to increase LH-RH release from the hypothalamus, resulting in induction of ovulation in patients with anovulation due to hypothalamic dysfunction. Since the rate of ovulation on clomiphene citrate treatment ranges from 60.5% to 80.5%. some patients do not respond to clomiphene citrate, Therefore, we evaluated the effect of combination treatment with Wen-Jing-Tang and clomiphene in patients who did not ovulate after clomiphene treatment.

### **Materials and Methods**

The subjects studied were 16 infertile women with anovulation who had no other sterility factors and who did not ovulate after three consecutive treatments with 150 mg a day of clomiphene for 5 days. Their average age was 30.6 years (range 24-35 yrs) and their mean (+/- S.E.) serum levels of LH, FSH and prolactin were 24.5 (+/- 3.3) mIU/ml 12.4 (+/- 1.1) mIU/ml and 12.8 (+/- 1.4) ng/ml, respectively. The patients were given 5 g of Wen-Jing-Tang daily from the day 2 of the menstrual period. The time of ovulation was determined as that of the high phase of the basal body temperature.

### **Results**

Ovulation occurred in 7 of the 16 patients treated and in 18 of 37 cycles. The rates of ovulation were 43.8% (per patients) and 48.6% (per cycles), respectively. There was no occurrence of the ovarian hyperstimulation syndrome or pregnancy.

### **Discussion**

The present study clearly showed that combined administration of Wen-Jing-Tang -clomiphene induced ovulation in patients who did not ovulate following clomiphene therapy. Wen-Jing-Tang is reported to induce LH-RH release from the rat hypothalamus, resulting in increase of LH release from the pituitary invitro in a sequential double-chamber perfusion system (Miyake et al., 1986. Since clomiphene is effective in cases of anovulation with

hypothalamo-pituitary dysfunction, combined therapy with clomiphene and Wen-Jing-Tang induced ovulation by additive actions at the hypothalamo-pituitary level. However, the possibility of direct action of these two drugs on the ovaries is not fully excluded. No pregnancy occurred on combined therapy, but this may have been because the study did not cover sufficient subjects and cycles.

No case of ovarian hyperstimulation syndrome was observed in the present study. The rates of ovarian hyperstimulation syndrome by clomiphene alone and Wen-Jing-Tang alone were both less than , 5%. These findings suggest that the ovarian hyperstimulation syndrome is rarely induced by this combined therapy. Therefore, this combined therapy should be tried before treatment with human menopausal gonadotropin-human chorionic gonadotropin, which has side effects, such as inductions of multiple pregnancy and the ovarian hyperstimulation syndrome.

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#### Reference

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