

Influence of Acupuncture on Infertility in Rats with Polycystic Ovarian Syndrome

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This research carried out in Wuhan, China examined the effect of acupuncture administered to rats on various fertility measures including the implantation rate of blastocysts. Acupuncture was used on the abdomen and limbs. This significantly increased ovarian and uterine development and the rate of implantation of embryos compared to the control group of rats which did not have acupuncture.

Abstract

Objective

To observe the effect and mechanism of acupuncture on infertility of rats with polycystic ovarian syndrome (PCOS).

Methods

PCOS rat model was induced by subcutaneous injection of oil solution of dehydroepiandrosterone (DHEA) in immature (24-day-old) female rats for continuous 20 days. Rats in the control group were given the same dose of DHEA oil.

PCOS rats were randomly divided into the control group (untreated) and the acupuncture group treated by needling acupoints of Guanyuan (CV4), Zhongji (CV3), Sanyinjiao (SP6) and Zigong (CX-CA1), 15 min once a day for 5 continuous days, starting from the 80th day after birth.

All rats were sacrificed at termination of the treatment, their uterus and ovaries were dissected for observation and blood levels of sex hormones were measured.

Results

Compared with the control group, the number of implanted blastocysts and the blastocyst implantation rate were higher and the blood levels of testosterone (T) and estradiol (E2) were lower in the acupuncture group ($P < 0.05$); but the difference between groups in serum levels of follicular stimulating hormone, luteinizing hormone and progesterone were of statistical insignificance ($P > 0.05$).

Moreover, the wet weight of the ovaries was lower and the equipotent diameter and area of glandular organ and cavity area ratio of gland and the stroma and mean thickness of endometria were higher in the acupuncture group than those in the control group ($P < 0.05$).

Conclusion

Acupuncture can significantly down-regulate the expressions of serum levels of T and E2, improve the development of ovaries and uterus, promote ovulation, enhance endometrial receptivity, and advance blastocyst implantation.