



Assisted Reproductive Therapy Outcome Improved by Acupuncture

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In the April 2002 issue of *Fertility and Sterility*, Dr. Wolfgang E. Paulus and his team at Christian-Lauritzen-Institut in Ulm, Germany, reported their recent study¹ 1) Paulus WE, Zhang M, Strehler E, El-Danasouri I, Sterzik K. Influence of acupuncture on the pregnancy rate in patients who undergo assisted reproduction therapy. *Fertil Steril* 2002 Apr;77(4):721-4. on assisted reproductive therapy (ART) which demonstrated an improved pregnancy outcome by inclusion of two acupuncture treatments in their protocol for embryo transfer. In this randomized study 160 patients who were undergoing ART with good quality embryos were divided into two groups: embryo transfer with acupuncture (n=80), and embryo transfer without acupuncture (control, n=80). Acupuncture was performed 25 minutes before and after embryo transfer. The control group was subjected instead to the same intervals of rest without supportive therapy. There were no statistically significant differences in age, number of prior cycles, or number of embryos transferred between the two groups of patients.

An ultrasound examination six weeks after embryo transfer determined a positive clinical pregnancy outcome by the presence of a fetal sac. Among the acupuncture group, clinical pregnancies were documented in 34 of 80 patients (42.5%), whereas only 21 out of 80 (26.3%) patients in the control group tested positive. Dr. Wolfgang E. Paulus and his colleagues conclude, "the results demonstrate that acupuncture therapy improves pregnancy rate," although they do not understand how acupuncture works. Further research needs to be conducted to assess the possible psychological effects of the acupuncture treatment upon uterine receptivity. "To rule out the possibility that acupuncture produces only psychological or psychosomatic effects, we plan to use a placebo needle set as a control in a future study."

In collaboration with the Department of Traditional Chinese Medicine at Tongji Hospital in Wuhan, China, "we chose acupuncture points that relax the uterus according to the principles of traditional Chinese medicine," influencing the spleen, stomach and bowel meridians and "result in better blood perfusion and more energy in the uterus." Auricular acupuncture points associated with the hypothalamic-pituitary-ovarian axis were engaged. Acupuncture points inducing relaxation were included in the study design.

It has been theorized that acupuncture stimulates small perturbations through singular points that elicit a "rectifying shock or reverberation", allowing the biological systems associated with those superficial foci on the skin to reset or retune to a more vitally stable state. In the case of a successful implantation of a blastocyst, this "jolt", by possibly engaging the autonomic nervous system, may temporarily increase the blood flow within the uterus, shift smooth muscle tonus, modify fluid secretions, and up-regulate receptivity to implantation. Maternal hormone corroboration with the newly introduced fetus may have been incited by the auricular

acupuncture (² According to the World Health Organization, 43 auricular points have demonstrated therapeutic value, which make up ~10% of the acupuncture points mapped on the body. Although an auricle has no crucial nerves or blood vessels and no significant physiological function other than collecting sound, its morphology is a sensitive indicator of malformations in other organs. Auricular malformations have been observed in maternal diabetes, maternal atherosclerosis, and the following syndromes: Beckwith- Wiedemann, Cri-du-chat, DiGeorge, Edwards, Fragile X, Goldenhar, Noonan, Patau, Potter, Treacher Collins, and Turner. It is recommended in a standard pediatrics textbook that any auricular anomaly should warrant a search for malformations in other parts of the body. Consideration of these facts may provide some enlightenment to the underlying developmental algorithms that allow acupuncture its effect. In ontogeny, the development of organizing centers, accompanied by topological maps of biophysical voltage and molecular gradients, choreographing cell layers to fan out, fold in sheets, and differentiate, precedes the development of the nervous system and other physiological systems.) in those patients who benefited from the treatment.

Needless to say, a group of patients are in varying states of readiness for either of the procedures of ART or acupuncture. There is an array of acupuncture treatments that have been successful in overcoming infertility (³ Gerhard I, Postneek F. Auricular acupuncture in the treatment of female infertility. *GynecolEndocrinol* 1992 Sep;6(3):171-81) and related gynecological disorders, and are worth investigating. The therapeutic effect can be achieved with various techniques, including needling, electricity, temperature variation, laser, and pressure at critical junctions of meridians upon the skin.

Although the causes for a patient to resort to ART are multifactorial, more refined screening in recent years for suitable candidates for the embryo transfer procedure has improved the overall success rate of ART. It is notable that the benefits of acupuncture and traditional Chinese medicine in treatment for both male and female infertility has been described in Chinese medical texts dating back to the Western Han Dynasty (206 BC – 24 AD). As a complementary treatment for the spectrum of factors that confound a pregnancy's outcome, acupuncture by a knowledgeable specialist who is aware the patient's symptom profile may well provide reinforcement to realizing a full term pregnancy, although pre-existing conditions may need remedy prior to a successful pregnancy outcome.

I propose that you and your patients consider undertaking a complementary and alternative approach in conjunction with the standard biomedical protocol. You need not fully understand a treatment modality in order for it to be beneficial. To counter the skeptic, the long documented history of overcoming infertility achieved by acupuncture not usually found in peer-reviewed medical journals is confirmation of its effectiveness greater than coincidences, anecdotes or allegory. There are minimal risks and appreciable possible rewards.

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