

## A new study of acupuncture in IVF: pointing in the right direction

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## Background

Complementary medicine for infertility:

- Mind-body connection
- Acupuncture
- Herbal medicine
- Massage
- Yoga
- Nutrition, Food, Diet



*Australia & New Zealand Journal of Obstetrics and Gynecology (2007)*

- a survey of 97 new patients being seen at an infertility clinic
- two-thirds reported using complementary medicine
  - nearly half had consulted with a **complementary therapy provider**, such as a chiropractor, acupuncturist, or naturopath
  - over three-quarters reported taking over-the-counter **multivitamins**
  - about a quarter to one-third used **herbal remedies** including chamomile, echinacea, peppermint, and chaste tree berry



## Acupuncture

- As an adjunct to IVF treatment
- Beneficial effect **at the time of ET** (embryo transfer) on the clinical pregnancy rate after IVF
  - Systemic review & meta-analysis (Manheimer et al., 2008): 7 RCT
  - Conchrane review (Cheong et al., 2008): 6 trials, 1022 patients
- More recent publications challenged previous results



## Acupuncture on the day of embryo transfer : a randomized controlled trial of 635 patients

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- Prospective, randomized, controlled and double-blinded trial, in Oct 2005 ~ Oct 2006
- Intervention: acupuncture on the morning of ET
- 635 pts undergoing IVF or ICSI
  - Acupuncture group (314 pts)
  - Control group (321 pts): valid placebo (non-penetrating acupuncture)



## acupuncture

- Performed by authorized professional acupuncturists or by nurses received thorough instruction and training
- Acupuncture points chosen according to traditional Chinese Medicine, same in both groups
  - Before ET: DU20, M29, KS6, Mp8, Le3
  - After ET: DU20, Co4, Mp10, M36, Mp6
  - bilaterally, rests with needle for 30 mins before and 30 mins after ET





Table 4 Pregnancies and live births.

Parameter	Acupuncture (n = 314)	Placebo (n = 321)
Positive HCG	126 (40)	149 (46)
Clinical pregnancy	101 (32)	112 (35)
Ongoing pregnancy	85 (27)	102 (32)
Single gestations	71 (84)	89 (87)
Twin gestations	14 (16)	13 (13)
Live birth	79 (25)	96 (30)
Singletons	68 (86)	84 (88)
Twins	11 (14)	12 (13)
Live birth	25 (20–30)	30 (25–35)

Values are number (%) or% (95% CI). Categorical data were analysed by the chi-squared test. There were no statistically significant differences between the two groups. HCG = human chorionic gonadotrophin.

- Outcomes (*acupuncture vs. control group*):
  - Ongoing pregnancy rates: 27% and 32%
  - Live birth rate: 25% and 30%

**not statistically significant**

- Acupuncture administered in relation to embryo transfer had **NO** effect on the outcome of IVF and ICSI.

The strengths of the study:

- **sample size**, almost twice as large as any earlier conducted study
- complete follow-up of all pregnancies and are able to document the number of live births
- **optimal design** by including a placebo procedure

## Clinical questions

- The role of acupuncture in IVF ?
- The practice of evidence-based medicine ?

## Does acupuncture enhance the success rate of IVF when performed at the time of ET?

- **NO**
- Sample size:
  - Future high-quality and sufficiently powered clinical trial will need to recruit 2300 women in each arm.
  - unrealistic

## What level of evidence is required by clinicians to incorporate a particular intervention into clinical practice ?

- Systemic review and meta-analyses : level 1a
  - Quality of component studies: small, of questionable quality, heterogeneous

## Expectation

- To develop clinical guidelines and scientific community in general to scrutinize claims of therapeutic efficacy and delay the introduction of new interventions in clinical practice until sufficient evidence



***Thank You ~***

