

TITLE BOX:

A Randomized Controlled Trial of Acupuncture for Prevention of Postdates Pregnancy (ACUMOMs1)

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ABSTRACT BOX:

A Randomized Controlled Trial of Acupuncture For Initiation of Labor In Nulliparous Women

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Abstract

Objective: Postdates labor inductions are associated with fetal and maternal morbidity and mortality. To evaluate the efficacy of acupuncture for outpatient labor initiation and the prevention of formal labor induction in nulliparous women

Study design: Randomized clinical trial; 56 nulliparous women were randomized to either routine medical care or medical care plus three acupuncture treatments at approximately 40 weeks gestation.

Results: The mean age and age of gestation at time of enrollment was 29.2 years and 39.6 weeks respectively. Thirty subjects were allocated to the acupuncture group and 26 were allocated to the routine medical care group. There were no statistically significant differences between the two study groups in baseline characteristics. All of the maternal

outcomes measured were non-significantly better in the acupuncture group compared to the medical care only group. Mean time from enrollment to delivery occurred 21 hours sooner in the acupuncture group ($p=0.36$), more women in the acupuncture group went into labor spontaneously (70% vs 50%, $p=0.12$), and more women in the acupuncture group had vaginal deliveries (16.7% vs 38.5%, relative risk=3.13, 95% CI: 0.90-10.8). In a subanalysis of patients who underwent spontaneous labor, the mean time to delivery was 51 hours shorter ($p=0.10$) in the acupuncture group. Survival analysis in this group revealed that delivery at any time point was more likely in the acupuncture group ($p=0.05$).

Conclusion: Acupuncture administered in the perinatal period appears to be favorably associated with several clinically important outcomes, including risk of cesarean delivery. This study, however, was not sufficiently powered to determine whether the benefits observed in the acupuncture group are the result of chance occurrence. This study was also limited by the lack of a placebo control group. A larger, placebo-controlled clinical trial is needed to confirm whether the trends observed in this study are reproducible

INTRODUCTION:

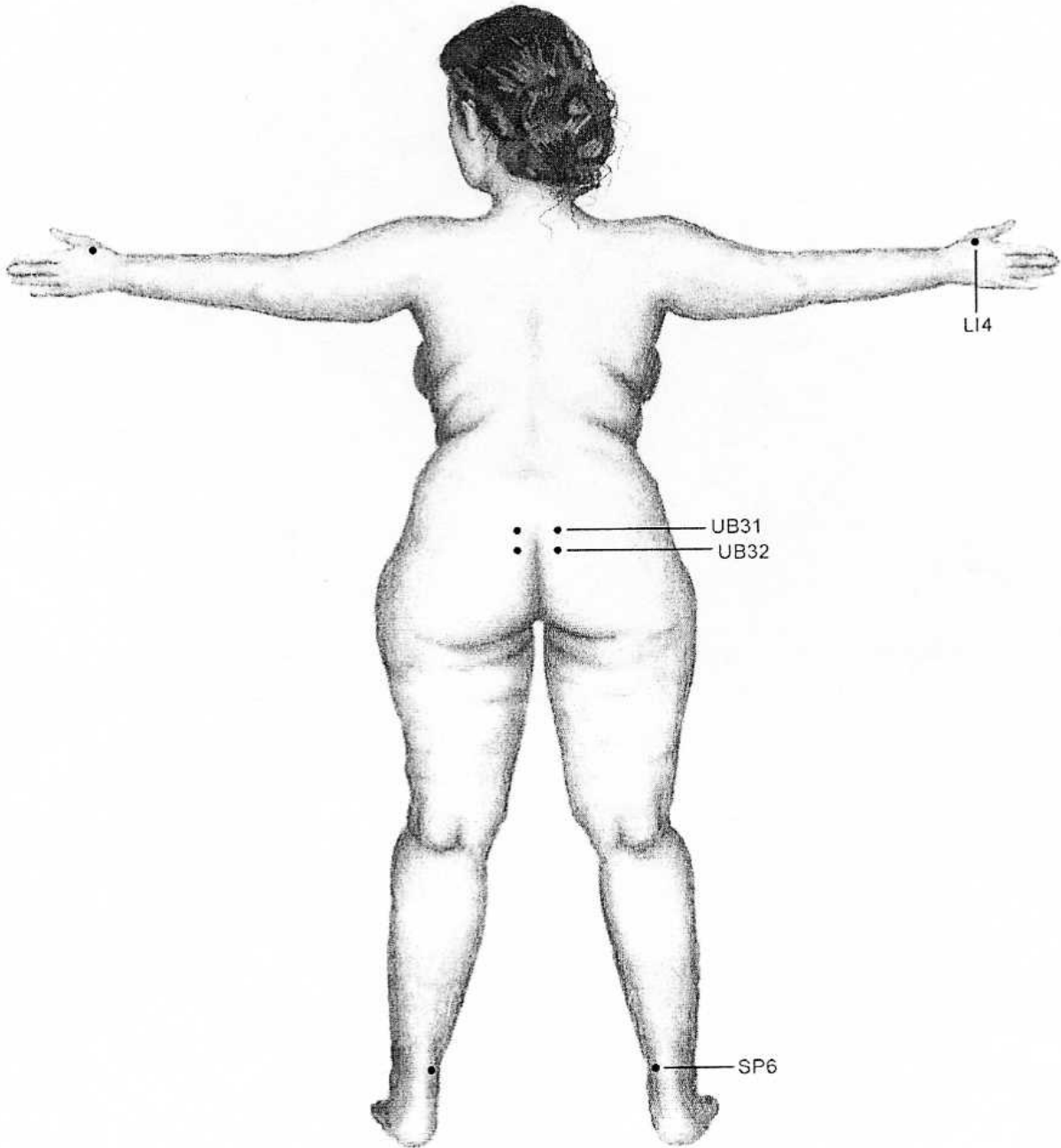
- Postdates pregnancies are associated with higher rates of maternal and fetal morbidity and mortality
- Acupuncture has been proven safe and effective in several conditions of pregnancy, including malpresentation and hyperemesis
- Acupuncture is commonly used in Eastern cultures to stimulate the labor process
- Prospective randomized assessment of acupuncture for stimulation of labor has not been previously reported in the United States

METHODS:

- Setting: UNC-Chapel Hill Family Practice Center from July 2004 through February 2005.
- Patients: Nulliparous women during the 40th week of gestation with Bishop score <7, accurate dating, and no contraindication to vaginal delivery
- Study Design: Randomized clinical trial
- Intervention: Routine prenatal care plus 3 acupuncture treatments using acupuncture points LI4, SP6, UB31 and UB32 (see diagram) and electrical stimulation at UB31/32
- Control: Routine prenatal care

METHODS:

Acupuncture Points for Labor Stimulation



RESULTS : DEMOGRAPHICS

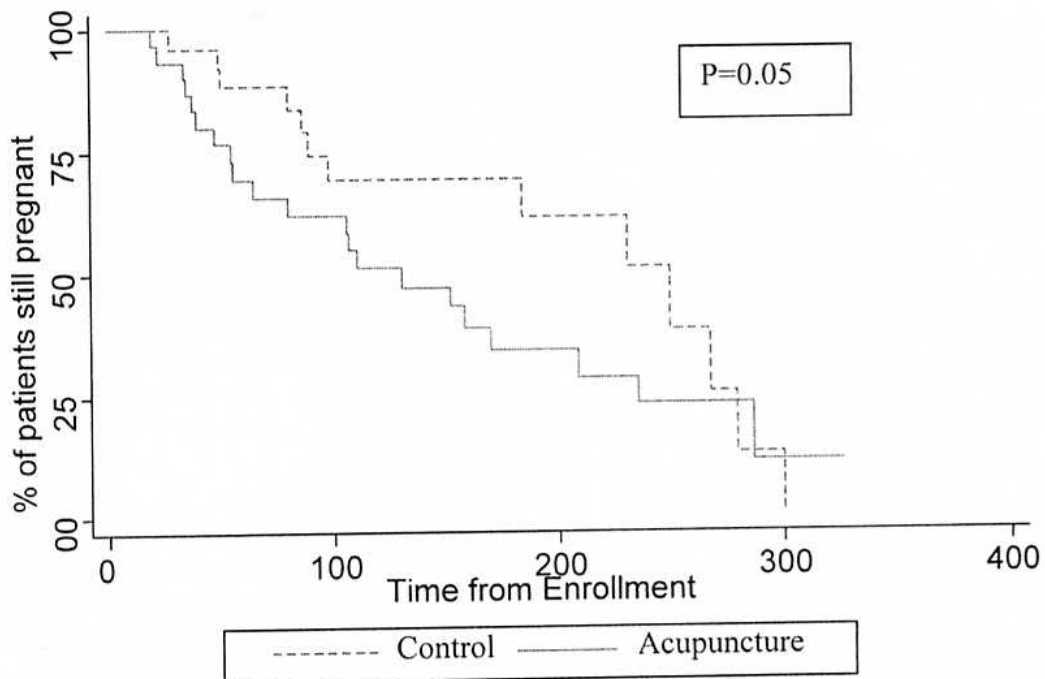
| | Acupuncture (N=30) | Control (N=26) | P-value |
|---|-------------------------------|---------------------------|----------------|
| Mean Maternal Age (yrs, 95%CI) | 29 (27-31) | 29 (27-31) | 0.91 |
| Mean Gestational Age (weeks, 95% CI) | 39.6 (39.2-39.9) | 39.6 (39.3-39.9) | 0.74 |
| Intake Median Bishop Score | 4 | 4 | 0.20 |
| Intake Mean Cervical Length (cm, 95% CI) | 2.5 (2.2-2.9) | 2.3 (2.0-2.6) | 0.38 |
| Race/Ethnicity (N) | | | |
| Caucasian | 27 | 22 | |
| Black | 1 | 3 | |
| Hispanic | 2 | 1 | 0.46 |

RESULTS:

| | Acupuncture (N=30) | Routine Medical Care (N=26) | |
|---|-----------------------|--------------------------------|---------------------------------|
| <i>Primary Outcome:</i> Time to Delivery (Hours) | 123.6 | 144.5 | P-Value 0.36 |
| Time to Delivery, Spontaneous Group (Hours) | 102.8 | 153.3 | P-value 0.10 |
| Spontaneous Onset of Labor # (%) | 21 (70.0%) | 13 (50.0%) | OR (95%CI) 2.33(0.78-6.98) |
| Cesarean Delivery (%) | 5 (16.7%) | 10(38.5%) | OR (95% CI) 3.13 (0.90-10.8) |

RESULTS:

Kaplan-Meier Survival Analysis of Cumulative Deliveries over Time in the Group of Spontaneously Laboring Women



CONCLUSIONS:

- Acupuncture appears to be well tolerated by women near the end of pregnancy
- Further study of the potential efficacy of acupuncture for labor induction is warranted