



ZITA WEST

Zita West Clinic

Acupuncture during Pregnancy

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1. Introduction

Although it forms a less integral part of the services offered by the Zita West clinic, acupuncture *during* pregnancy is thought to offer some benefits. It has been reported acupuncture can aid with common problems such as nausea and backache. It may be beneficial during labour by inducing labour and turning breech babies. These topics will be discussed further.

A number of the problems associated with pregnancy (tiredness, back pain, nausea) are not uncommon within the general public and are consequently generally well researched. However, pregnancy is not a normal state and it should not be assumed that everything that is safe for use in normal conditions should be used during pregnancy. Therefore it is important to design studies specifically looking at the correct sample, and this means assessing acupuncture's efficacy and safety during pregnancy. Unfortunately this is less well researched, and only studies explicitly evaluating pregnant women are included in this review. Old beliefs that acupuncture can induce abortions (or premature labour) prevent many practitioners offering it, and pregnant women are commonly uncomfortable trying new interventions and joining studies whilst pregnant. Consequently, many studies have small sample numbers and lack statistical power, and acupuncture's benefits remain unclear. However, despite some apprehension for using acupuncture during pregnancy, many women are less keen to take pharmaceutical interventions, some of which are clearly contra-indicated for use during pregnancy. Consequently, acupuncture may offer a suitable alternative for many interventions, and act well in conjunction with others.

A review paper published in 2009 (Smith and Cochrane, 2009) came to the conclusion that there is growing interest in acupuncture and less concerns over its safety. The authors felt that the methodology of recent trials has improved, and that systematic reviews were thorough. They concluded that while definitive conclusions about acupuncture during pregnancy could not yet be made, there is a growing body of evidence to support its use as an adjunctive treatment. The remainder of this report will discuss specific pregnancy-related problems distinctly, with a particular emphasis on improving adverse symptoms *during* pregnancy.

2. Acupuncture during pregnancy

2.1 Nausea

Acupuncture administered during pregnancy to reduce morning sickness has received some focus, with many studies specifically assessing acupuncture's ability to overcome hyperemesis gravidarum, a severe form of morning sickness that can cause complications for both mother and fetus. However, old Chinese beliefs stated that acupuncture administered during pregnancy could increase the risk of a spontaneous abortion. Many women are also less keen to try treatments of any kind during an established pregnancy, especially one that is not well researched and could be considered 'invasive'. Consequently, the use of *acupuncture* to reduce morning sickness is less well-researched than *acupressure*. None-the-less, relevant papers found in PubMed using the search term 'acupuncture, morning sickness' are summarised in Table One.

(Helmreich, et al., 2006) performed a meta-analysis of papers investigating various forms of acustimulation (i.e., acupressure, acupuncture, and electrical stimulation [ETS]). 14 trials involving a total of 1655 women were evaluated and assessed. They found that acupuncture was the least effective treatment for reducing nausea and vomiting, with acupressure providing more benefits. However, acupressure papers were more numerous and generally had larger sample sizes, possibly because women perceived this to be a more suitable intervention for pregnancy. Further still, acupressure can be self-administered, whereas acupuncture requires a practitioner. Patients with symptoms severe enough to interfere with daily activities and psychological well-being are less likely to travel, and therefore less likely to participate in a study requiring them to make numerous trips to a practitioner. Therefore the findings by some groups that acupuncture can improve patients' social and psychological health are particularly encouraging. Neri *et al* (2005) found that acupuncture and acupressure enabled patients suffering from morning sickness to better complete normal daily tasks and the intervention protocols, significantly more so than patients receiving a Western medicine. Smith *et al* (2002a) also reported decreased depression and improved vitality and social interactions in women receiving acupuncture to improve nausea and sickness. Therefore, even if acupuncture is unsuccessful in directly reducing symptoms, it may be particularly helpful in aiding women to cope with their sickness, and incorporate hospital visits for alternative treatments. Importantly, Carlsson *et al* (2000) found that taken in conjunction with

traditional Western medicines (within an in-patient setting) acupuncture significantly increased recovery time of patients with hyperemesis gravidarum, reducing both nausea and vomiting. Taken together, these studies suggest acupuncture may be a good adjunct to Western medicines, by both decreasing recovery time and improving psychological status. Interestingly, several review papers suggest acupuncture has a more substantial effect on reducing nausea than vomiting. However, since western antiemetics are often successful in stopping vomiting but relatively ineffective against controlling nausea, acupuncture (possibly combined with on-going acupressure) as an adjunct to additional Western measures may provide the best overall relief to patients. Further still, a paper in 2000, stated that stress, worry, poor marital relationships and disillusioned thinking all predispose women to hyperemesis gravidarum (Leeners, et al., 2000). Patients often report feeling relaxed by acupuncture, and the patient-practitioner relationship can be more equal and genuine than between patients and clinicians. Consequently, although it is difficult to prove conclusively, acupuncture may help patients remain calm and feel supported, therefore reducing the development of severe morning sickness.

Despite the apparent benefits offered, as summarised in Table One, these studies have some criticisms, namely poor sample sizes and a lack of double-blinding to treatments. A recent review (Matthews, et al., 2010) looking at multiple interventions, maintained that the current literature regarding acupuncture's exact effect is conflicting, and that studies lack power. Consequently, the efficacy of acupuncture to reduce sickness, despite being promising, is not confirmed and requires ongoing research.

It is also felt by some that safety studies evaluating the use of acupuncture *during* pregnancy must continue. However, on the analysis of 593 Australian women, Smith *et al* (2002b) concluded acupuncture is a safe procedure as data collected on pregnancy complications, perinatal outcome and congenital abnormalities showed no difference between controls, sham acupuncture, formula acupuncture or TCM acupuncture. (Smith, et al., 2002b) As more studies such as this are performed, it is becoming increasingly accepted that acupuncture is safe when pregnant, and is fully supported by the British Acupuncture Council.

Much of the evidence for acupuncture in nausea relief (especially P6 stimulation) has come from patients undergoing chemotherapy, post-operative or those suffering travel sicknesses. Ongoing research into acupuncture specifically during pregnancy is important, and better

designed studies with larger sample numbers should be performed. A review into the mechanism of acupuncture's potential antiemetic action also failed to conclusively conclude how it works (Moffet, 2006). Ongoing research into acupuncture's mechanism of action may help better identify patients who will benefit from it.

2.2 Lower back and pelvic pain

As for nausea, while acupuncture's effect on back (and to a lesser extent pelvic) pain in general is well researched, its use specifically during pregnancy is less so. Considering the mechanism by which acupuncture works is not fully understood, it is naïve to assume it will work in all situations. Pregnancy is a time of substantial hormonal and metabolomic changes (among others) and therefore does not reflect other causes of back pain, for which acupuncture may be known to work well. Studies specifically evaluating acupuncture's use for back pain during pregnancy are summarised in Table Two.

It does appear that acupuncture may be beneficial for patients, especially when combined with other medications and/or exercise regimes. A review last year stated that certain interventions, including acupuncture, were underutilised due to a lack of knowledge and fear of harming the fetus. (Vermani, et al., 2010) While papers are small and may suffer bias from a lack of proper blinding, there is promise for this intervention, especially when alternative options are limited. A systematic review published in 2008 was only able to identify 3 studies that met the inclusion criteria, highlighting the importance for more studies. (Ee, et al., 2008) However, they stated that acupuncture appeared to be beneficial, especially as an adjunct to other treatments. Of interest, a recent study reported that acupuncture for back and pelvic pain is most likely only beneficial *during* pregnancy. After pregnancy, pain subsided in 99% of patients within 3 months regardless of any interventions tried. (Elden, et al., 2008c)

Although there is an apparent lack of research, from the findings of one paper it is expected that women are willing to try alternative/complementary therapies to reduce back pain and improve daily functioning. Wang *et al* (2005), found that 61.7% of pregnant women would try one such therapy, and that the 44.6% of midwives and obstetricians would suggest acupuncture, second only to massage. (Wang, et al., 2005). Such a high rate of expected uptake warrants acupuncture's efficacy, safety and mechanism to remain a focus of scientific research.

2.3 Improving blood flow

As mentioned in the previous report ‘Acupuncture and Fertility’ acupuncture has been shown to improve ovarian and uterine blood flow, possibly improving fertility status. Due to acupuncture’s use in inducing labour, care is often taken by practitioners to stimulate points not associated with the uterus. However, there is some evidence that acupuncture can improve umbilical artery flow. Poor blood flow can affect both the mother and fetus, and is most commonly indicative of ‘intrauterine growth restriction’ which causes high rates of neonatal mortality and morbidity.

In 2001, Zeisler *et al* attempted to ‘evaluate the influence of acupuncture on the blood flow in the umbilical artery, fetal aorta and uterine artery and on the fetal heart rate using two different acupuncture points (SP-6 (Sanyinjiao) and LI-4 (Hegu))’ (Zeisler, et al., 2001) One group of 50 women received acupuncture at both points sequentially with Doppler’s performed before treatment, before changing needle location and after treatment. A second group of 25 women received only LI-4 acupuncture, with Doppler’s performed before and after intervention. All women were a mean age of 28 years, and mean gestational age of 40 + 3 weeks. They found that acupuncture had a positive effect on umbilical artery waveforms when using a combination of SP-6 (Sanyinjiao) and LI-4 (Hegu) acupuncture points, but not IL-4 alone.

However, there appears no additional research into this topic, and therefore there is not enough evidence to suggest acupuncture can improve fetal blood flow *in utero*.

3. Acupuncture at labour

The following topics will not be discussed in as much detail as they are rarely encountered by practitioners at the Zita West clinic. However, patients who have enjoyed acupuncture prior to pregnancy or during the earlier stages may wish to continue using it right up to labour. They are therefore discussed briefly, using recent reviews to identify the most current knowledge and opinions.

3.1 Turning breech

The breech position (buttock or feet-first) is a relatively rare complication (3-4% of term births, higher in pre-term) but poses particular problems to the delivery. Turning a breech

baby is desired to prevent some of the complications of this position, including cord prolapse and retention of the head. External cephalic version is commonly used to turn the baby, but is not always successful and therefore other techniques have been attempted.

The TCM method technique routinely used is moxibustion of point B67 (with or without acupuncture), attempted at weeks 32 and 34 weeks to allow time for the above mentioned technique to be used if moxibustion fails. It is important to note that spontaneous correction of the breech position at this time is quite high. Consequently, acupuncture success rates should be compared to spontaneous correction rates in order to be relevant. However, a review in 2008 stated that despite studies lacking consistency and having several shortcomings, forms of acupuncture are more likely to correct breech positions than expectant management. (van den Berg, et al., 2008). Most studies performed acupuncture at gestational ages 28 to 34 weeks. Importantly, a modelling study performed in 2010 by the same group predicted that acupuncture would be more cost-effective than expectant management as the number of breech babies later in pregnancies would be reduced. (van den Berg, et al., 2010)

The most recent review of acupuncture to turn breech babies was published in 2010. (Sananès, et al., 2010) It identified 18 relevant papers, 5 of which were randomised and therefore deemed to be more informative. Although the protocols were inconsistent (timing, number of sessions etc) the authors concluded acupuncture should be attempted for breech presentations. They identified several shortcomings of previously published papers, and have themselves started a more rigorous randomised, placebo-controlled study to more strongly validate acupuncture's benefits during breech pregnancies.

Taken together it appears moxibustion (with or without acupuncture) may be a viable option for correcting breech positions earlier in pregnancy, although ongoing research is warranted.

3.2 Inducing labour

There are a number of western pharmaceutical methods for inducing labour, yet acupuncture has been investigated as an alternative method. The most recent review was published in 2009. (Lim, et al., 2009). A robust search through several databases was performed to identify papers published from 1970 to 2008. After selecting only human studies in English, ten relevant papers were identified. As is the usual case with many acupuncture reports, the

authors concluded that while a definitive role is yet to be established, the evidence thus far is suggestive for a positive role in labour induction. More research needs to be done to elucidate the exact efficacy of this method and the mechanism by which it works.

4. Conclusion

Although the Zita West clinic is not often involved with acupuncture during pregnancy, and not at all during labour, patients who feel supported by acupuncture prior to pregnancy may be more willing to continue to use it at later stages. Therefore it is important to understand to what extent acupuncture can be expected to help such patients. Current knowledge is most robust for a benefit in reducing nausea and pain, and for aiding labour. Acupuncture in general is expected to help reduce stress and improve ‘vitality’ and energy, although explicit studies in pregnant women are lacking, so benefits should be explained with caution. None-the-less, feeling supported during pregnancy is important for both the mother’s and fetus’s health, and acupuncture may well be very beneficial to some patients.

References

- Carlsson, C. P. O., Axemo, P., Bodin, A., Carstensen, H., Ehrenroth, B., Madegård-Lind, I. and Navander, C. (2000). Manual Acupuncture Reduces Hyperemesis Gravidarum:: A Placebo-Controlled, Randomized, Single-Blind, Crossover Study. *Journal of pain and symptom management* **20**, 273-279.
- Ee, C. C., Manheimer, E., Pirotta, M. V. and White, A. R. (2008). Acupuncture for pelvic and back pain in pregnancy: a systematic review. *American journal of obstetrics and gynecology* **198**, 254-259.
- Ekdahl, L. and Petersson, K. (2010). Acupuncture treatment of pregnant women with low back and pelvic pain—an intervention study. *Scandinavian Journal of Caring Sciences* **24**, 175-182.
- Elden, H., Fagevik Olsen, M. and Ostgaard, H. (2008a). Acupuncture as an adjunct to standard treatment for pelvic girdle pain in pregnant women: randomised double blinded controlled trial comparing acupuncture with non penetrating sham acupuncture. *BJOG: An International Journal of Obstetrics & Gynaecology* **115**, 1655-1668.
- Elden, H., Hagberg, H., Olsen, M. F., Ladfors, L. and Ostgaard, H. C. (2008b). Regression of pelvic girdle pain after delivery: follow-up of a randomised single blind controlled trial with different treatment modalities. *Acta obstetricia et gynecologica Scandinavica* **87**, 201-208.
- Elden, H., Ladfors, L., Olsen, M. F., Ostgaard, H. C. and Hagberg, H. (2005). Effects of acupuncture and stabilising exercises as adjunct to standard treatment in pregnant women with pelvic girdle pain: randomised single blind controlled trial. *British Medical Journal* **330**, 761.
- Elden, H., Ostgaard, H. C., Fagevik-Olsen, M., Ladfors, L. and Hagberg, H. (2008c). Treatments of pelvic girdle pain in pregnant women: adverse effects of standard treatment, acupuncture and stabilising exercises on the pregnancy, mother, delivery and the fetus/neonate. *BMC complementary and alternative medicine* **8**, 34.
- Guerreiro da Silva, J. B., Nakamura, M. U., Cordeiro, J. A. and Kulay Jr, L. (2004). Acupuncture for low back pain in pregnancy—a prospective, quasi-randomised, controlled study. *Acupuncture in Medicine* **22**, 60.
- Habek, D., Barbir, A., Habek, J. C., Janculiak, D. and Bobic-Vukovic, M. (2004). Success of acupuncture and acupressure of the Pc 6 acupoint in the treatment of hyperemesis gravidarum. *Forsch Komplementärmed Klass Naturheilkd* **11**, 20-23.
- Helmreich, R. J., Shiao, S. Y. and Dune, L. S. (2006). Meta-analysis of acustimulation effects on nausea and vomiting in pregnant women. *Explore (New York, NY)* **2**, 412.
- Knight, B., Mudge, C., Openshaw, S., White, A. and Hart, A. (2001). Effect of acupuncture on nausea of pregnancy: a randomized, controlled trial. *Obstetrics & Gynecology* **97**, 184.
- Kvorning, N., Holmberg, C., Grennert, L., Åberg, A. and Åkeson, J. (2004). Acupuncture relieves pelvic and low back pain in late pregnancy. *Acta obstetricia et gynecologica Scandinavica* **83**, 246-250.
- Leeners, B., Sauer, I. and Rath, W. (2000). Nausea and vomiting in early pregnancy/hyperemesis gravidarum. Current status of psychosomatic factors. *Zeitschrift für Geburtshilfe und Neonatologie* **204**, 128.
- Lim, C. E. D., Wilkinson, J. M., Wong, W. S. F. and Cheng, N. C. L. (2009). Effect of Acupuncture on Induction of Labor. *The Journal of Alternative and Complementary Medicine* **15**, 1209-1214.

- Lund, I., Lundeberg, T., Lönnberg, L. and Svensson, E. (2006). Decrease of pregnant women's pelvic pain after acupuncture: a randomized controlled single-blind study. *Acta obstetrica et gynecologica Scandinavica* **85**, 12-19.
- Mao, Z. N. and Liang, C. E. (2009). Observation on therapeutic effect of acupuncture on hyperemesis gravidarum. *Zhongguo zhen jiu= Chinese acupuncture & moxibustion* **29**, 973.
- Matthews, A., Dowswell, T., Haas, D. M., Doyle, M. and O'Mathúna, D. P. (2010). Interventions for nausea and vomiting in early pregnancy. *Cochrane database of systematic reviews (Online)* **9**.
- Moffet, H. H. (2006). How might acupuncture work? A systematic review of physiologic rationales from clinical trials. *BMC complementary and alternative medicine* **6**, 25.
- Neri, I., Aliais, G., Schiapparelli, P., Blasi, I., Benedetto, C. and Facchinetti, F. (2005). Acupuncture versus pharmacological approach to reduce Hyperemesis gravidarum discomfort. *Minerva ginecologica* **57**, 471-475.
- Rosen, T., de Veciana, M., Miller, H. S., Stewart, L., Rebarber, A. and Slotnick, R. N. (2003). A randomized controlled trial of nerve stimulation for relief of nausea and vomiting in pregnancy. *Obstetrics & Gynecology* **102**, 129.
- Sananès, N., Vayssière, C., Helmlinger, C., Viville, B., Kohler, M., Aïssi, G., Trieu, N. T., Langer, B. and Favre, R. (2010). Acupuncture for breech version: Principles, technique, mode of action and utility-A literature review. *Journal of Maternal-Fetal and Neonatal Medicine* **23**, 455-458.
- Smith, C., Crowther, C. and Beilby, J. (2002a). Acupuncture to treat nausea and vomiting in early pregnancy: a randomized controlled trial. *Birth* **29**, 1-9.
- Smith, C., Crowther, C. and Beilby, J. (2002b). Pregnancy outcome following women's participation in a randomised controlled trial of acupuncture to treat nausea and vomiting in early pregnancy. *Complementary therapies in medicine* **10**, 78-83.
- Smith, C. A. and Cochrane, S. (2009). Does acupuncture have a place as an adjunct treatment during pregnancy? A review of randomized controlled trials and systematic reviews. *Birth* **36**, 246-253.
- Ternov, N. K., Grennert, L., Åberg, A., Algotsson, L. and Åkeson, J. (2001). Acupuncture for lower back and pelvic pain in late pregnancy: a retrospective report on 167 consecutive cases. *Pain Medicine* **2**, 204-207.
- van den Berg, I., Bosch, J. L., Jacobs, B., Bouman, I., Duvekot, J. J. and Hunink, M. G. (2008). Effectiveness of acupuncture-type interventions versus expectant management to correct breech presentation: a systematic review. *Complementary therapies in medicine* **16**, 92-100.
- van den Berg, I., Kaandorp, G. C., Bosch, J. L., Duvekot, J. J., Arends, L. R. and Hunink, M. G. (2010). Cost-effectiveness of breech version by acupuncture-type interventions on BL 67, including moxibustion, for women with a breech foetus at 33 weeks gestation: a modelling approach. *Complementary therapies in medicine* **18**, 67-77.
- Vermani, E., Mittal, R. and Weeks, A. (2010). Pelvic Girdle Pain and Low Back Pain in Pregnancy: A Review. *Pain Practice* **10**, 60-71.
- Wang, S. M., Dizinno, P., Lin, E. C., Lin, H., Yue, J. J., Berman, M. R., Braveman, F. and Kain, Z. N. (2009). Auricular Acupuncture as a Treatment for Pregnant Women Suffering from Low Back and Posterior Pelvic Pain: A Pilot Study. *American journal of obstetrics and gynecology* **201**, 271.
- Wang, S. M., Zinno, P. D., Fermo, L., William, K., Caldwell-Andrews, A. A., Bravemen, F. and Kain, Z. N. (2005). Complementary and alternative medicine for low-back pain in pregnancy: a cross-sectional survey. *Journal of Alternative & Complementary Medicine* **11**, 459-464.

- Wedenberg, K., Moen, B. and Norling, Å. (2000). A prospective randomized study comparing acupuncture with physiotherapy for low-back and pelvic pain in pregnancy. *Acta obstetrica et gynecologica Scandinavica* **79**, 331-335.
- Zeisler, H., Eppel, W., Husslein, P., Bernaschek, G. and Deutinger, J. (2001). Influence of acupuncture on Doppler ultrasound in pregnant women. *Ultrasound in Obstetrics and Gynecology* **17**, 229-232.