Caring for the pregnant woman and her baby in a changing maternity service environment: the role of acupuncture

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Women have traditionally been high users of complementary therapies and use of these therapies continues during pregnancy and birthing. While women look to acupuncture and other therapies to support them during this time, traditional maternity services are in a state of change. In Australia, there is an increase in births, a workforce crisis, an increase in birthing in labour ward settings, few opportunities for women to birth at home, increased caesarean sections and an increase in obstetric interventions. The future role of acupuncture in this changed environment will be influenced by the evidence of safety and effectiveness of acupuncture. Research evaluating acupuncture during the antenatal period, labour preparation and birthing is small in quantity, but there are encouraging findings suggesting acupuncture maybe safe and effective. Women have prioritised interventions to manage pregnancy symptoms such as nausea and back pain, and interventions to prepare for labour and manage pain in labour as important. Further acupuncture trials are needed to ensure women have reliable and valid information to inform their decision making. Assessment of safety requires contributions from researchers, practitioners and integration with institutional data collection systems. Research of effectiveness should involve rigorous designs, but with debate about the appropriateness of traditional randomised controlled trial designs to evaluate complex interventions, and the limitations of sham controls, different approaches with mixed research methods should be considered. Exploring new research methods, especially those which explore the woman’s experience with acupuncture, are also key to defining a role in the future.

In Australia in 2006 there were 282 169 births. This was an increase of 3.6% on the previous year.1 Similar increases in birth rates have also been noted in many industrialised countries over the past five years.2 Australia’s increasing birth rate, combined with a maternity caregiver workforce crisis (midwives and doctors) and increasing consumer demand for changes in the way care is delivered, has led the National Government to recently launch a Maternity Services Review. This workforce crisis is being seen in other countries with an estimated shortfall in the midwifery workforce of 380 000 midwives worldwide.3 The initial report of the Maternity Services Review was released in February 2009 and recommended significant changes to service delivery.4

Most women in Australia give birth in conventional labour ward settings (97.3%), with few women able to access birth centres (2.0%) and even fewer able to access home birth (0.3%).5 This contrasts with The Netherlands where 80% of women still give birth at home. While breastfeeding initiation rates are high at around 92%, by six months this has dropped to 14%.6 The breastfeeding rate in Australia is higher than in the UK, where 69–71% of infants are initially breastfed; however, it is lower than countries such as Norway, where 92% of mothers are breastfeeding their child at three months of age, 80% by six months and 40% at one year.6,7 The rate of caesarean section has climbed in both private hospitals (22% in 1991 to 41% in 2006) and public hospitals in Australia (16% in 1991 to 28% in 2006).8 This is much higher than in countries such as The Netherlands (14%) and Scandinavian countries such as Sweden and Finland (16–20%).7 Australia’s caesarean section rate is now 25% higher than the average rate of all Organisation for Economic Co-operation and Development countries and ranks as fourth highest. Other interventions in birth, such as induction of labour, epidural anaesthesia and use of pharmacological analgesia, have also risen in the past 10 years. It appears, however, that the majority of women seek to have a normal labour and birth and feel more satisfied when this is achieved with minimal intervention due to a greater sense of control.9

Women are increasingly asking for alternative methods of coping with pain and in recent years have asked more for access to water (eg, birthing pools) during labour and birth. Complementary therapies such as acupuncture, homeopathy, aromatherapy, reflexology and increasingly hypnotherapy continue to be sought by women during pregnancy and birth,10 and midwives increasingly undertake additional training in order to be able to support women’s requests.11 With the changing maternity service environment what role can acupuncture offer to women to assist with their care during pregnancy, supporting childbirth, management of labour and care after giving birth? Core to this answer is the need for evidence to examine the safety and effectiveness of acupuncture during pregnancy and birthing.

Research synthesis

The evidence for acupuncture during pregnancy and birthing

In a recent review we reported that evidence was beginning to consolidate for the use of acupuncture to assist with the management of some complaints during pregnancy and birthing.12 Our review included 16 studies, eight randomised controlled trials (RCTs) and eight systematic reviews. Evidence of an emerging benefit was found for the use of acupuncture and related modes of stimulation for treating nausea and vomiting in early pregnancy.13 There is a small but promising body of evidence for the use of acupuncture to treat back pain during pregnancy, pain relief during labour and the use of moxibustion to correct a breech presentation. Evidence from three trials of acupuncture with the management of back pain has been summarised in two systematic reviews.14 15 These reviews found acupuncture as an adjunct treatment was superior to standard treatment alone and physiotherapy in relieving pain. An additional trial by Lund and colleagues found no difference between acupuncture and a sham control.16 The use of moxibustion has been evaluated in two systematic reviews both of which suggest promising evidence of an increase in cephalic presentation.17 18 Two systematic reviews found a benefit from acupuncture with providing effective pain relief in labour.19 20 Trials of acupuncture show a reduced need for pain relief compared to standard care and sham control, and a recent trial also found acupuncture reduced pain in labour compared with minimal acupuncture.21 Evidence is mixed for the use of acupuncture with the management of emotional disorders during pregnancy, acupuncture for cervical ripening and induction of labour, and breastfeeding.22–27 Overall the methodological quality of acupuncture research has improved, and these trials have been described as being of moderate to adequate quality.

The safety of acupuncture in pregnancy

In general acupuncture is considered safe, with the risk of minor side effects small (a rate of 1.5 per 1000 treatments).28 These
side effects may include, nausea, dizziness, fainting, increased pain or bruising. Bensoussan and Myers have suggested that the risks associated with acupuncture may be attributed to reactions related to needling or related to the clinical judgment of the acupuncturist. Acupuncturists caring for women during pregnancy and birthing have an additional responsibility to provide treatment that is safe to the pregnant woman and her fetus or baby. Complementary therapies are in general perceived to be safe and associated with fewer side effects compared with other more traditional forms of treatment. In a survey of 220 obstetricians and midwives in South Australia, the majority of midwives and obstetricians held positive views towards the use of acupuncture during pregnancy, and 82% of respondents considered acupuncture to be safe to use during pregnancy.

Data on the safe use of acupuncture during pregnancy has been informed by clinical research, with studies reporting on side effects or adverse events related to treatment, for example, pain, discomfort, feeling faint, tired or relaxed, and so on. However, in relation to pregnancy it is also important to collect outcomes that relate to pregnancy and neonatal outcomes. Clinical trials can be a good source of data because they should provide routine monitoring of adverse events within the trial.

Data on safety has been reported in trials evaluating acupuncture to treat nausea, back pain, induction of labour, pain relief in labour and moxibustion for the management of breech presentation. Limited data has been reported on the safety of acupuncture when administered during early pregnancy. Trials in the first trimester of pregnancy were mostly limited to the treatment of nausea and vomiting in early pregnancy. One large RCT found no difference in the incidence of adverse perinatal outcome, congenital abnormalities, pregnancy complications or neonatal outcomes for those women receiving acupuncture compared with standard care.

Data from systematic reviews of acupuncture to treat back pain found no serious adverse events associated with acupuncture. In these individual trials minor adverse events, such as local pain or bruising, sweating, nausea, weakness and tiredness were reported. In a recent trial, acupuncture administered with strong stimulation led to minor adverse complaints (pain, initially worsening of pain) from subjects, but these had no observable adverse influences on the pregnancy, delivery or the fetus or neonate. The use of acupuncture support to women during childbirth and in the management of labour was also not associated with any evidence of adverse effects to the mother or baby. Safety had been studied in more detail from trials examining the use of moxibustion. One systematic review of moxibustion concluded that it was safe with no significant harmful effects on the woman or her baby immediately during or following moxibustion. Further examination of side effects from moxibustion have been reported in small sample of subjects recruited to the treatment arm of a moxibustion RCT. No adverse events in fetal and maternal wellbeing were observed with moxibustion.

### The use of acupuncture during pregnancy

The prevalence, patterns and reasons for using acupuncture during pregnancy and birthing are not well documented. One study from the UK indicated that acupuncture was used to assist with the management of gynaecological or obstetric conditions by 8% of the study population. In general, acupuncture may be used for conditions not well treated by conventional medicine, and is used as an adjunct to conventional care. There is limited data describing women’s reason for use of acupuncture during pregnancy. Wang and colleagues reported the majority of pregnant women indicated they would accept a complementary therapy for the management of their low back pain, with 44% identifying acupuncture as an acceptable therapy. One small study of acupuncture use during pregnancy reported on an audit of a hospital-based acupuncture clinic. The most common reasons for acupuncture treatment were physiological symptoms including back pain, symphysis pubis dysfunction and sciatica.

### DISCUSSION

Traditional models of care provided by obstetricians and midwives to women during pregnancy and birthing are changing. Birthing in many Westernised societies occurs in an increasingly medicalised environment, with increasing rates of intervention. Most women, however, wish for a natural birth. Women actively seek out complementary therapies during pregnancy to improve their wellbeing, assist with the management of pregnancy complaints or to assist with the management of labour. The Cochrane Consumer Network has highlighted systematic reviews that consumers prioritise as being particularly relevant to them. Consumers identified several systematic reviews of acupuncture including: interventions for nausea and vomiting in early pregnancy; interventions to prevent and treat pelvic and back pain in pregnancy; induction of labour; and pain management in labour.

For many of these topics evidence of effectiveness is building. This extensive list identifies other important areas of pregnant women’s wellbeing and where preliminary research has begun, for example, psychosocial interventions to treat antenatal depression, interventions to correct a breech presentation or assistance with breastfeeding.

The use of acupuncture during pregnancy appears to be mostly consumer driven. There is a gap in research describing women’s decision to use acupuncture. Further research describing the patterns of women’s use of acupuncture during their pregnancy, their decision to use acupuncture and the outcomes women value from treatment is needed. There is also a need for further research to ensure women are well informed to make decisions about their use of acupuncture. When strong evidence begins to consolidate for acupuncture in pregnancy, acupuncture can potentially become integrated into routine pregnancy care. Establishing this evidence will require that acupuncture is safe and effective.

In the risk adverse environment of pregnancy, healthcare professionals have great concern for patient safety and it is important that the acupuncture community contributes to further examining the safety of acupuncture during pregnancy. There is no current evidence that acupuncture causes miscarriage, premature labour or an increase in treatment reactions. It is important for clinical trials of acupuncture during pregnancy to have an independent adverse events committee. Although clinical trials can assess adverse outcomes, the number of women studied will be small. Therefore other approaches need to be considered. Acupuncture practitioners can become involved with the collection of data describing pregnant women’s treatment response to acupuncture. Systematic collection of this data would contribute to answering the question is the incidence of treatment reactions from acupuncture administered to pregnant women different to the general population. Prospective reporting of the use of complementary therapies during pregnancy to routine standardised institutional data collection systems would allow linkage to pregnancy and neonatal outcome data. Such data linkage would allow data mining, and the identification of patterns between acupuncture pregnancy and neonatal outcomes.
The limitations of RCTs and the challenges of acupuncture research have been well documented in recent issues of Acupuncture in medicine. There are variations to the RCT design that address some of these shortcomings, including pragmatic and preference trials. Perhaps it is time to refocus research designs and continue to examine the evidence for acupuncture during pregnancy using mixed methods.

CONCLUSION

In many countries in the developed world questions are being asked about rising intervention rates in birth. Women have also voiced the desire to have access to greater choice and a wider range of options in maternity care. It is apparent that the desire to access complementary therapies, such as acupuncture, remains significant. There appears, however, to be a lack of formalised systems for assisting women to make choices in this area, rather they often obtain information from the internet or from friends. Providing evidence based information about acupuncture, and being able to refer women to qualified practitioners, appears to be a limited. This means women often have to rely on information and recommendations gleaned from the internet and/or friends in order to make decisions. In models of care, such as homebirth or the birth centre, these needs seem to be catered for. Lack of strong evidence to support the use of acupuncture complicates this further. Exploring new research methods, especially those which look at the woman’s experience with acupuncture, is key to changing this in the future. Incorporating more education into the midwifery and obstetric curricula may be another way of ensuring the issue is discussed more with women and reacted to less by the key professionals that impact on decision making in the maternity care environment. Together these approaches will guide the future role of acupuncture in the care of pregnant women and their babies.

**Summary box**

The delivery of maternity services in many countries is in a process of change. Although there is continued interest by women in the use of acupuncture during pregnancy and birthing, there is a need to continue exploring the evidence for safety and effectiveness.

**REFERENCES**


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