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A NATIONAL SURVEY OF HOW ACUPUNCTURE IS CURRENTLY USED IN MIDWIFERY CARE AT SWEDISH MATERNITY UNITS

Original article

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Title

A national survey of how acupuncture is currently used in midwifery care at Swedish maternity units

Abstract

Objective: it is unknown how acupuncture is used in midwifery care in Sweden and what kind of requirements health care providers have for midwives and acupuncture training programmes. The aims of this study were to survey indications for the use of acupuncture in midwifery care in Sweden and to examine the criteria and requirements used for purchase of acupuncture education programmes.

Design: a postal survey using a structured questionnaire

Setting: 45 maternity units in Sweden

Participants: the midwife- in- charge of the units

Measurements and findings: the most common indications for the use of acupuncture treatment were relaxation, pain relief, retained placenta, after pains, milk stasis during lactation, hyperemesis and pelvic instability. Specific requirement for the acupuncture education were provision of a short course, during weekdays including a follow-up course.

Key conclusion: acupuncture is widely used for many indications in Swedish maternity units despite weak or no evidence for its effect in midwifery care. Requirements for acupuncture education did not seem to be in accordance with what might be expected for this kind of qualified intervention.

Implications for practice: the use of acupuncture in midwifery care should not persist until systematic evaluation of the effect of this method is carried through.

Introduction

The use of complementary and alternative medicine (CAM) is increasing in many areas of health care (Barrett, 2001, Beer and Ostermann, 2003). Acupuncture therapy in particular has seen a recent upsurge. Interest in the use of acupuncture as an alternative care therapy started in the USA in the early 1970s and the number of practicing acupuncturists is expected to quadruple between 2002 and 2015 (Kaptchuk, 2002). Studies from Europe report an increased acceptance and use of acupuncture (Vas et al., 2007, Widmer et al., 2006).

Acupuncture is an ancient method and a component of traditional Chinese medicine that has been in use for centuries. The method entails penetration of the skin with thin needles at certain points on the body. The lines linking these points are known as meridians (Ma et al., 2005, Yelland, 2005). The acupuncture points are selected individually, depending on indications for treatment and the needles are manually or electrical stimulated until a special sensation is reached. This sensation is called De Qi, which means a feeling of soreness, heaviness, numbness and distension in the area around the needle and reflects activation of afferent fibres and also gives the acupuncturist an indication that the needle has been correctly placed (Yelland, 2005).

A search of the scientific literature revealed that published systematic reviews of Randomised Controlled Trials (RCT) in four areas specifically related to acupuncture and midwifery care were found. These were nausea and vomiting in early pregnancy (Jewell and Young, 2003), pelvic pain in pregnancy (Pennick and Young, 2007), pain relief during labour (Lee and Ernst, 2004, Smith et al., 2006) and induction of labour (Smith et al., 2008). The authors of these reviews all conclude that there is at present insufficient evidence to give clear guidance about the use of acupuncture in these areas. An example of another area of midwifery care for

which RCTs of acupuncture have been carried out was identified as lactational mastitis (Kvist, 2006, Kvist et al., 2004).

In Sweden a model of integrative medicine has been proposed in which classical medicine and complementary therapies are mixed in a non-hierarchical way (Sundberg et al., 2007). This kind of model has also been considered by the World Health Organisation in a report from a working group on quality of academic education in traditional medicine (2004). In 1998 a change in the Swedish law against quackery (The Swedish National Board of Health and Welfare, 1984) made the use of complementary therapies by trained practitioners lawful. This means that health care providers are allowed to use acupuncture treatment as long as its use is based on scientific knowledge and clinically tested experiences.

One area of health care that has, in Sweden, readily considered the possibilities of acupuncture treatment is women's reproductive health and its use has rapidly increased during the last 20 years (The Swedish National Board of Health and Welfare, 2008). Swedish midwives have shown a keen interest in the use of acupuncture treatment during childbirth and the breastfeeding period and some other areas of women's health care. Some of these areas have been scientifically studied by Swedish midwives (Elden, 2008, Kvist, 2006, Mårtensson, 2006, Ramnero et al., 2002). One reason for the enthusiastic interest in acupuncture treatment within midwifery care is that it is generally believed that this method is harmless for women and infants when used during pregnancy and birth (Yelland, 2005). Statistics from The Medical Birth Register in Sweden show a reduction in the use of acupuncture therapy in intrapartum midwifery care, between 1996 and 2006 from 19 % to 12 % (The Swedish National Board of Health and Welfare, 2008). However, these figures are inaccurate due to missing data in the register. At present there is no general overview of

indications for the use of acupuncture therapy in obstetrics in Sweden but at a conference arranged by the Swedish Association of Midwives in 2007, midwives cited many indications for the use of acupuncture (Mårtensson and Kvist, 2008). The focus of this article is the use of acupuncture within the areas of pregnancy, birth and the postpartum period.

Before Swedish midwives may use acupuncture, a short course on acupuncture in obstetrics is required (Mårtensson and Wallin, 2006). However, there are not any specific regulations regarding the extent and content of these courses. This means that each health facility decides on what is considered as adequate education for the use of acupuncture treatment. At present it is also unknown what type of requirements health care facilities have for providers of acupuncture training programmes. Therefore, the aims of this study were to survey indications for the use of acupuncture in midwifery care in Sweden, and to examine the criteria and requirements used for purchase of acupuncture education programmes.

Methods

Design

The study was designed as a postal survey of the 50 maternity units in Sweden.

Sample

A structured questionnaire, constructed specifically for this study, was sent to all 50 maternity units. The questionnaire was addressed to the midwife- in- charge of the unit with an invitation to answer questions in relation to the use of acupuncture and the purchase of training programmes at the unit where they worked. According to Swedish law, an ethical permit was not required for this type of study (Government Offices legal databases, 2003).

Permission to carry out this study was given by the manager of the clinical department. All the participants gave their informed consent in accordance with the Declaration of Helsinki (Rickham, 1964) assuring confidentiality and freedom to withdraw from the study at any time.

Data collection

Before the start of the study the questionnaire was pilot tested among 10 midwives working in maternity units. Following this test some minor revisions were carried out to clarify some of the questions. The questionnaire comprised 17 questions, most of which had pre-determined response alternatives, some with prompts to motivate the answers. Three questions were open-ended. It was possible for the respondents to give free comments to some of the questions. The questions were constructed to get as much information as possible about the use of acupuncture, purchasing of acupuncture training programs and the names of the instructors. The names of the instructors were asked for in order to be able to invite them to partake in a second study about acupuncture education itself, which will be reported in another article. The following areas were in focus: background information about the childbirth units; number of deliveries per year, the number of midwives with and without acupuncture training, frequencies of acupuncture treatment and indications for treatment with acupuncture. Questions were posed about the purchasing of acupuncture training programmes; which member of staff was responsible for purchasing, what educational level was required of the instructor, which criteria were used when employing an acupuncture instructor and the name of the instructor. Data were collected by means of the revised questionnaire which was administered between August 2007 and November 2007. Two reminders were sent out to all respondents, the first one in September 2007 and the second in October 2007.

Analysis

Descriptive statistics, including frequencies, means with standard deviations (SD) and percentages were used. The information obtained from the open questions was subjected to a method of content analysis and was conducted by data reduction and organized into categories by themes (Krippendorff, 1980, Weber, 1985).

Findings

Of the 50 questionnaires that were sent out 45 (90 %) were completed and returned. The range of births per year at the units varied from 372 to 5700. The mean number of years that acupuncture had been used and frequency of acupuncture treatment did not differ between small (≤ 2000 deliveries per year) and larger units (> 2000 deliveries per year). The results showed however, that there were larger percentages of midwives with acupuncture training at small units, Table 1. The range of years that acupuncture had been available to women cared for in Sweden was 1-20 (mean 11.3, SD 3.6), acupuncture was used for a mean of 13.3 % (SD 8.6) of women during 2006 and the mean proportion of midwives who had at any time received training in acupuncture was 75.5 % (SD 21.5) not shown in Table 1.

The results showed that many different indications for acupuncture treatment in midwifery care were reported, Table 2. The most common indications for the use of acupuncture treatment were areas related to birth; relaxation and pain relief and retained placenta. For the post partum period common indications were; after pains and milk stasis during lactation. Acupuncture during pregnancy was used mostly for hyperemesis and pelvic instability.

Table 1. Births per year at the units participating in the survey, length of time acupuncture treatment has been in use, frequency of acupuncture treatment during 2006 and the percentage of midwives with training in the use of acupuncture. Values are given as n (%), Mean \pm SD.

Births per year	Number (%) of maternity departments	Mean \pm SD no. of years acupuncture has been used	Mean \pm SD frequency, in percent, of acupuncture treatment during 2006	Mean \pm SD percent of midwives with acupuncture training
372 - 1000	12 (26.6)	10.4 \pm 3.2	10.6 \pm 6.4	80 \pm 15.1
1001 - 2000	15 (33.3)	12.0 \pm 3.2	15.8 \pm 11.7	80 \pm 20.2
2001 - 3000	9 (20.0)	8.6 \pm 3.7	12.5 \pm 7.3	64 \pm 35.2
3001 - 5700	9 (20.0)	14.0 \pm 3.1	15.0 \pm 7.7	69 \pm 14.3

Table 2. Indications for the use of acupuncture treatment at Swedish maternity units, (n=45). Values are given as n (%).

Indications for treatment by acupuncture	Numbers (%) of maternity units giving acupuncture treatment for these indications
<i>Pregnancy</i>	
Hyperemesis	9 (20.0)
Pelvic instability during pregnancy	8 (17.8)
Relaxation during pregnancy	1 (2.2)
Pain relief during pregnancy*	1 (2.2)
<i>Birth</i>	
Relaxation during labour	44 (97.8)
Pain relief during labour	44 (97.8)
Retained placenta	37 (82.2)
Urine retention during labour	4 (8.9)
<i>Post partum period</i>	
After pains	29 (64.4)
Milk stasis during lactation	27 (60.0)
Urine retention post-partum	13 (28.9)
Mastitis	8 (17.8)
Relaxation after birth	1 (2.2)

Pain relief after birth*	1 (2.2)
Increasing milk production	1 (2.2)
Painful breastfeeding	1 (2.2)

* Not defined

Thirty-eight (84 %) of the units responded to a question about which person at the unit was responsible for the purchasing of acupuncture training programmes for the staff. The most common professional categories involved in both purchasing of acupuncture training programmes and making the final decision were a midwife and /or an obstetrician, Table 3.

Table 3 Professionals involved in the purchasing of acupuncture training programs for midwives, (n=38).

Professional category involved in purchasing training programmes	n	(%)
Midwife	24	(63.2)
Obstetrician	5	(13.2)
Midwife & obstetrician	7	(18.4)
Registered nurse	1	(2.6)
Registered childrens nurse	1	(2.6)
Professional category making the final descision about purchase		
Midwife	15	(38.5)
Obstetrician	11	(28.2)
Midwife & obstetrician	10	(25.6)
Registered nurse	2	(5.1)
Unit manager	1	(2.6)

Twenty-four of the units reported that they used a private firm. A further 20 reported that they used a private person employed by the hospital. Eight used an instructor from a university. In total 17 different training programme organizers were identified. Regarding demands which affected the choice of programme organizer, more than half of the units reported more than one criterion. The most often cited criteria referred to the organizer's education and experiences in acupuncture and in obstetrical care. These could be, for example, specialists in

acupuncture, and/or in obstetrical acupuncture, midwives or medical doctors. That the teaching should be based on research was only mentioned by one unit. Other criteria referred to the extent, content and price of the course. The most common requirements were a short course, two- four days, given on weekdays, during the day and nearly half of the units also required a follow-up course. Other requirements are shown in Table 4.

Table 4 Criteria given by the purchasers of acupuncture training programs for their choice of instructor, (n=30).

Criterion for choosing an acupuncture organizer	<i>n</i>
Specialist education in acupuncture (diploma)	10
Specialist in acupuncture within obstetrics including pain relief	8
Is a trained midwife	6
Is a doctor	3
Has references	2
Has some university education	2
Experience of acupuncture / acupuncture exclusively	2
Trained in Traditional Chinese Medicine	1
Has a western perspective	1
Research-based teaching	1
Teaching experience	1
Theory and practice	1
Known and respected	1
Follow-up should be part of the programme	1

All of the 45 respondents answered the question about satisfaction with the training programme, and 35 answered that they were satisfied concerning the instructors and the course content. Five respondents answered that they were not satisfied and referred to experiences of a course that was too short, and some stated that it would have been preferable to have a follow-up course. The remaining five stated that they were satisfied with the content in the course but dissatisfied regarding the length of the course. It was also reported that it is difficult to further develop personal skills and techniques. However, in order to uphold use of acupuncture therapy there were some suggestions such as continuous follow-up through repetition, discussions and support from more skilled and experienced midwives.

A question regarding whether there had been a tendency towards a reduction in the use of acupuncture during the previous 10 years was answered by all respondents; 40 answered “yes” and five “no”. The reasons for reduction in the use of acupuncture at the maternity units could be divided into three different themes; reasons related to midwives, the women and the organisation, as described below.

- The midwives
 - lack of experienced midwives
 - new midwives without acupuncture education
 - lack of knowledge up-dating, follow-up and support
 - declining interest from midwives
- The women
 - less demand for acupuncture from mothers-to-be
 - fear of needles

- decreased popularity
 - lack of information during pregnancy
- The organisation
 - organisational changes
 - increased work load

Discussion

Acupuncture therapy is in use in most delivery wards in Sweden. Although no statistical analysis of differences between small and large units was carried out, it is interesting to note that the units with the largest number of births were those that had been first to offer acupuncture treatment but that the smaller units were those with a higher percentage of midwives presently trained in acupuncture. This could merely be a reflection of the fact that staff from smaller units tend to stay longer in the same place of employment.

Indications for the use of acupuncture

The list of indications for which acupuncture is used by Swedish midwives in obstetrical care was quite comprehensive in spite of insufficient evidence of its efficacy. Several studies have been published in the areas of pregnancy, birth and the post partum period, but the results are not yet conclusive (Jewell and Young, 2003, Lee and Ernst, 2004, Pennick and Young, 2007, Smith et al., 2006).

The result showed that the most common indications for acupuncture treatment during pregnancy were hyperemesis and pelvic pain or instability but acupuncture was reported to be used for these reasons in only 20 per cent of the units. This low figure could be due to the fact that the questionnaires were sent to the maternity units rather than to the antenatal clinics.

However, these results are in accordance with earlier findings in which it has been reported in a randomized trial with cross-over design, that in cases of hyperemesis, acupuncture in combination with standard treatment compared to placebo treatment hastened the reduction of nausea and vomiting (Carlsson et al., 2000). It has also been shown that acupuncture and stabilizing exercises combined with standard treatment are effective for pelvic pain during pregnancy (Elden et al., 2008).

The most common indications for acupuncture during birth were relaxation, pain relief and retained placenta, which were cited by nearly 98 % of the units. There are six randomized controlled trials, published between 2002 and 2008, concerning relaxation and pain relief during labour. In two studies acupuncture with needles placed at recognized acupuncture points was compared with a treatment where needles were placed at false points, i.e. non-recommended points, and results showed that women in the group where recognized points were used experienced less pain (Skilnand et al., 2002, Hantoushzadeh et al., 2007). However, a third study with a similar design (Ziaei and Hajipour, 2006) found no such effect. Further, when acupuncture was compared with standard obstetric care regarding pain relief (acupuncture not an option), lower rates of use of Pethidin, epidural analgesia, nitrous oxide and injections by sterile water were reported in the group given acupuncture (Nesheim et al., 2003). Of the remaining two studies, one did not report any effect of acupuncture on women's experience of labour pain, but reported a higher degree of relaxation when compared with standard care (Ramnero et al., 2002), and one study reported that sterile water injections, which were given at non specific acupuncture points for both low back and abdominal pain, were more effective in reducing pain in comparison with acupuncture (Martensson et al., 2008). When Borup et al (2009) compared acupuncture, transeletrical nerve stimulation and traditional analgesia, they found that acupuncture is a good supplement for other types of pain

relief. They also pointed out that a practitioners education and experience are important to achieve successful results of the treatment. Another interesting result is that so many units reported that they used acupuncture for retained placenta. To the authors' knowledge there is no scientific evidence for the benefit of acupuncture in cases of retained placenta.

The most common indications for use of acupuncture during the post partum period were after pains, milk stasis during lactation and urine retention. To the authors' knowledge, no studies have been published with the specific aim of evaluating acupuncture for after pains or urine retention after childbirth. However, it is possible that the use of acupuncture for after pains is similar to that used for the pain of childbirth. The evidence for the use of acupuncture for lactational mastitis remains uncertain; in studies from Sweden, women did not require fewer days of health care when treated with acupuncture, but their symptoms were relieved more expediently than without acupuncture (Kvist, 2006, Kvist et al., 2007).

The findings of the published trials are in part contradictory. One reason could be methodological limitations, such as small samples, lack of power calculation or lack of detailed information about the treatment regarding, for example, timing and intensity. Another limitation may be that control procedures which are meant to be inert (minimal, superficial, sham, or 'placebo' acupuncture), do in fact activate tactile afferents and consequently result in the alleviation of the affective component of pain (Lund and Lundeberg, 2006). This may in some cases explain why no differences were found between controls and intervention with real acupuncture. There was no definite recommendation for the use of acupuncture in any of the research identified in the Cochrane Collaboration Library. It is possible that the lack of evidence is a contributory reason for the decline in the use of acupuncture in Sweden. There are also ethical implications surrounding the issue of continuing to carry out treatments in

clinical practice when knowledge of the treatment is incomplete and no systematic evaluation is available.

Requirements for acupuncture education

In the present study it was found that although midwives were actively involved in the purchasing of acupuncture training programmes, the final decision was often taken by or in conjunction with an obstetrician. In the hierarchy of Swedish health care it is most often a medical doctor who has responsibility for the financial resources in a unit, and the authors' interpretation of these answers is that the midwife-in-charge makes inquiries about acupuncture programmes, decides which sounds most suitable and then asks the doctor-in-charge to approve the purchase. It would have been interesting to know what academic degrees the persons making these decisions had, but unfortunately this question was not included in our questionnaire. A requirement that teaching should be based on research was mentioned by only one respondent which may mirror a lack of understanding for the necessity of evidence-based practice in this area (Ministry of Health and Social Affairs, 1982).

The rate of acupuncture treatment was relatively low in this study and 89 % answered that its use had decreased during the previous 10 years. The respondents suggested two major reasons for the decline in the use of acupuncture; lack of knowledge caused by lack of progressive training and a trend towards less consumer demand. The latter is interesting because most of the women in Sweden participate in parenthood classes during pregnancy. During these classes information is given about pain relief methods and acupuncture is one alternative that is presented to the women. However, one study in Sweden reported that first-time mothers who had participated in parenthood classes had a higher rate of epidural analgesia than those who did not participate (Fabian et al., 2005). It is unknown what kind of focus midwives have

during the conveyance of this kind of information. It is an important issue in birth and maternity care that midwives reflect on their responsibilities for shaping the attitudes of young women of fertile age. Is it, in fact, pregnant and birthing women who demand certain modes of care or is it the midwife, with her professional authority who transfers her preferences to the women? Some respondents did answer that the decline in the use of acupuncture was rooted in declining interest from midwives. Another reason for this decrease could be a report from The Swedish National Board of Health and Welfare in which it was recommended that acupuncture should be used only in connection with research, carried out with the aim of clarifying the pain relief effect of acupuncture (The Swedish National Board of Health and Welfare, 2001). Furthermore, acupuncture treatment means that the midwife has to spend more time together with the woman in labour. However, the way in which Swedish maternity care is organized in many units (with central CTG surveillance and high rates of epidural analgesia) may not support midwifery care that requires the presence of the midwife at the woman's side.

The results indicate that the enthusiasm of individual midwives seems to have a great impact on the use of acupuncture within midwifery care. If acupuncture therapy is to be kept alive as an option for birthing women, there is a need for more well-designed research, knowledge up-dating, support for staff members and access at ward level to midwives who are experienced in acupuncture, which has previously been shown to be a good concept for sharing knowledge (Blow, 2005).

The high response rate in this study indicates that these results may be transferable to Swedish maternity units as a whole, although it is uncertain to what extent the results described here are similar to other industrialised countries.

Conclusion

It has been shown that acupuncture is widely used for many indications in Swedish maternity units despite weak or no evidence for its effect in midwifery care. At present, accessible results from scientific publications are inconclusive and are sometimes contradictory, and therefore there is a need for further research in this area. This research needs to have both quantitative and qualitative approaches. Demands for a scientific basis for acupuncture training programmes from those who purchase the programmes were few. Generally, requirements for acupuncture education did not seem to be in accordance with what might be expected for this kind of qualified treatment. Therefore it is of importance to obtain an in-depth knowledge of how acupuncture education for midwives is constructed.

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