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Acupuncture as an alternative method of analgesia during delivery: an integrative review

La acupuntura como método alternativo de analgesia durante la entrega: una revisión integrativa

Acupuntura como método alternativo de analgesia durante parto: uma revisão integrativa

ABSTRACT

Objective: To identify whether acupuncture actually provides relief from labor pain in nulliparous and multiparous women. **Method:** This is an integrative review study in which the electronic databases Pubmed and Medline were used, which were accessed through the Virtual Health Library. In addition to these, SciELO was also used to search for articles. The Health Science Descriptors (DeCS) were "Analgesia for Acupuncture", "Labor and Delivery" and "Parity", as well as, with their respective translations into English, published in the period from 2003 to 2014. Data collection was conducted in October 2019. **Results:** Of the studies examined, only one concluded that there was no analgesic effect on labor pains with the use of acupuncture. **Conclusion:** Acupuncture shows the potential to contribute to the relief of labor pains and provides a holistic view of parturients.

DESCRIPTORS: Acupuncture analgesia; Childbirth Work; Labor Pain.

RESUMEN

Objetivo: identificar si la acupuntura realmente proporciona alivio del dolor de parto en mujeres nulíparas y múltiparas. **Método:** Este es un estudio de revisión integrador en el que se utilizaron las bases de datos electrónicas Pubmed y Medline, a las que se accedió a través de la Biblioteca Virtual en Salud. Además de estos, SciELO también se utilizó para buscar artículos. Los Descriptores de Ciencias de la Salud (DeCS) fueron "Analgesia para la acupuntura", "Trabajo y parto" y "Paridad", así como, con sus respectivas traducciones al inglés, publicados en el período de 2003 a 2014. La recopilación de datos fue realizado en octubre de 2019. **Resultados:** de los estudios examinados, solo uno concluyó que no había efecto analgésico sobre los dolores de parto con el uso de la acupuntura. **Conclusión:** la acupuntura muestra el potencial de contribuir al alivio de los dolores de parto y proporciona una visión holística de las parturientas.

DESCRIPTORES: Analgesia de acupuntura; Trabajo de parto; Dolor de Parto.

RESUMO

Objetivo: Identificar se a acupuntura produz de fato alívio das dores do parto em nulíparas e múltiparas. **Método:** Trata-se de um estudo de revisão integrativa em que foram utilizadas as bases de dados eletrônicas Pubmed e Medline, as quais foram acessadas por meio da Biblioteca Virtual em Saude. Além dessas, também foi utilizada a SciELO para a busca de artigos. Os Descritores em Ciência da Saúde (DeCS) foram "Analgesia por Acupuntura", "Trabalho de Parto" e "Paridade", bem como, com suas respectivas traduções para o inglês, publicados no período de 2003 a 2014. A coleta de dados foi realizada em outubro de 2019. **Resultados:** Dos estudos examinados, somente um concluiu que não houve efeito analgésico sobre as dores do parto com o uso da acupuntura. **Conclusão:** A acupuntura demonstra potencial para contribuir no alívio das dores do trabalho de parto e presta um olhar holístico das parturientes.

DESCRIPTORIOS: Analgesia por acupuntura; Trabalho de Parto; Dor do Parto.

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Tatiane Pombo

Medical Student, University Center of Maringá (UNICESUMAR).
ORCID: 0000-0002-7060-5019

Ana Carla Cardoso Costa

Medical Student, University Center of Maringá (UNICESUMAR).
ORCID: 0000-0001-6567-0732

Felipe Sá Ferreira

Doctor. Master's student in Public Health, Faculty of Public Health, University of São Paulo (USP).
ORCID: 0000-0002-8987-5289

Sarah Marques Cardoso

Medical Student, University Center of Maringá (UNICESUMAR).
ORCID: 0000-0003-1254-1464

Rafaela Ribeiro

Medical Student, University Center of Maringá (UNICESUMAR).
ORCID: 0000-0002-3482-0758

Thaís Pordeus Leite Costa Mendes

Doctor. Specialist in Urgency and Emergency at the Metropolitan Faculty of Vale do Aço (FAMEV).
ORCID: 0000-0003-3969-5877

Marcos Benatti Antunes

Nurse. PhD in Nursing from the State University of Maringá (UEM). Professor of the Medical Course at Centro Universitário de Maringá (UNICESUMAR).
ORCID: 0000-0002-5139-8827

INTRODUCTION

Acupuncture, one of the traditional Chinese medicine treatment methods, is widely applied for pain relief.⁽¹⁾ There are points in the body that, when stimulated, activate the so-called “meridians”, channels through which the vital force or Chi passes. Acupuncture is based on the stimulation of these meridians, using needles, spheres, electricity or even seeds. Each meridian is directly associated with an individual's physiological and / or mental system. Thus, the stimulation of such points changes the circulation of vital energy (Chi) and, also, blood flow (XUÈ).^(2,3)

The mechanisms involved in pain analgesia by acupuncture are not yet fully understood, but many studies have shown that peptides and opioids are released in both the central and peripheral nervous systems. In addition, results have also revealed that there is a change in neurohormonal function.^(4,5)

The control of labor pain has been a controversial issue among obstetricians^(6,7), but there is an interest in the development of acupuncture as an option for painkillers to treat this pain.⁽¹⁾ According to the World Health Organization (WHO), the ideal rate of cesarean sections should be between 10% and 15%

and is associated with a decrease in maternal and newborn mortality.⁽⁸⁾ However, in Brazil more than half of deliveries (55.5%) performed in the public system are performed by cesarean section⁽⁹⁾ and one of the main reasons that lead to this is the fear of labor pain.^(6,7,9)

Pain during childbirth that is produced by uterine contractions, cervical dilation and enlargement of the pelvic and vaginal floor is considered one of the most severe types of pain.⁽⁷⁾ However, the pain of labor does not depend only on each woman's innate physiological mechanism. It is also linked to the individual characteristics of each patient, such as socio-cultural, socioeconomic and emotional factors. For many, pain is considered to be very painful and even terrifying, which makes them choose methods that alleviate this suffering, through painkillers or even undergoing cesarean section. Paying attention to these facts, it is extremely important to know the experiences and expectations of each woman in relation to the moment of delivery.^(10,11)

A study that aimed to identify the perception of parturients about the use of acupuncture in the analgesia of labor pains, concluded that many women are interested in trying this method of pain control and thus know other ways of deal-

ing with this moment so unique in every woman's life: the childbirth.⁽¹²⁾

Therefore, the aim of the present study was to identify, through an integrative review, whether acupuncture actually provides relief from labor pain in nulliparous and multiparous women. From this, make this knowledge public in order to transform the delivery process less exhaustive for pregnant women and professionals, encouraging women to choose natural birth.

METHOD

It is an integrative review study that enables the systematization of results from a guiding question, allowing to maximize the knowledge of an object of study.

The following electronic databases were used: National Library of Medicine (Pubmed) and Medical Literature Analysis and Retrieval System Online (Medline), which were accessed through the Virtual Health Library (VHL). In addition to these, the Scientific Electronic Library Online (SciELO) was also used to search for articles. The search was guided by the question: Does acupuncture have an analgesic effect on labor pains? Data collection to answer this question was carried out in October

2019. We sought articles related to analgesia and the relief of labor pains regardless of the parity of the women covered in them, in English and Portuguese. The surveys were carried out with the Health Science Descriptors (DeCS) "Acupuncture Analgesia", "Childbirth Labor" and "Parity", as well as, with their respective English translations, "Acupuncture Analgesia", "Labor, Obstetric" and "Parity", correlating them using the Boolean operators "e" or "and" to form the combinations.

Articles that included the following criteria were included: randomized, observational studies or clinical trials that included the practice of acupuncture, including its main variations, acupressure, electroacupuncture and moxibustion - thermal acupuncture, as a method of pain relief suffered by pregnant women during labor. The sample consisted of only articles published between 2003 and 2014.

Articles that were not randomized, observational and clinical trials were excluded. In addition, articles that con-

templated other non-pharmacological therapies for the relief of labor pain were discarded, other than acupuncture and its main variations (acupressure, electroacupuncture and moxibustion - thermal acupuncture).

The analysis of the selected articles was carried out by two evaluators, TAP and ACC, which was done individually. In cases where there was no consensus on inclusion, a third author, SMC, was responsible for evaluating this article.

To select the articles, first they were identified and then the inclusion and exclusion criteria were applied to find out the eligibility of the articles. Finally, the inclusion of articles that fit the standards of this review was completed.

The main information about the selected articles was demonstrated by means of a synoptic table, containing the following elements: author, sample characteristics, type of intervention, main objectives and significant outcomes, with the exception of the chosen observational study. Data analysis and description were performed qualitatively.

The steps of the methodological process described are represented by means of a flowchart (Figure 1).

An instrument validated by Ursi was used⁽¹³⁾, to analyze and collect data from the selected articles, in order to structure the results and choose the most significant data. The instrument has the following items: identification of the article, institution of the study, type of publication, methodological characteristics of the study and assessment of methodological rigor.⁽¹³⁾ This study found relevance in highlighting in a schematic picture the characteristic of the sample, the type of intervention used, the main objective of the study and the significant outcomes, according to Chart 1.

RESULTS

The search in the databases resulted in 27 articles, of which 20 articles were excluded, due to the non-fulfillment of the eligibility criteria of this review or due to duplication in databases (Figure 1).

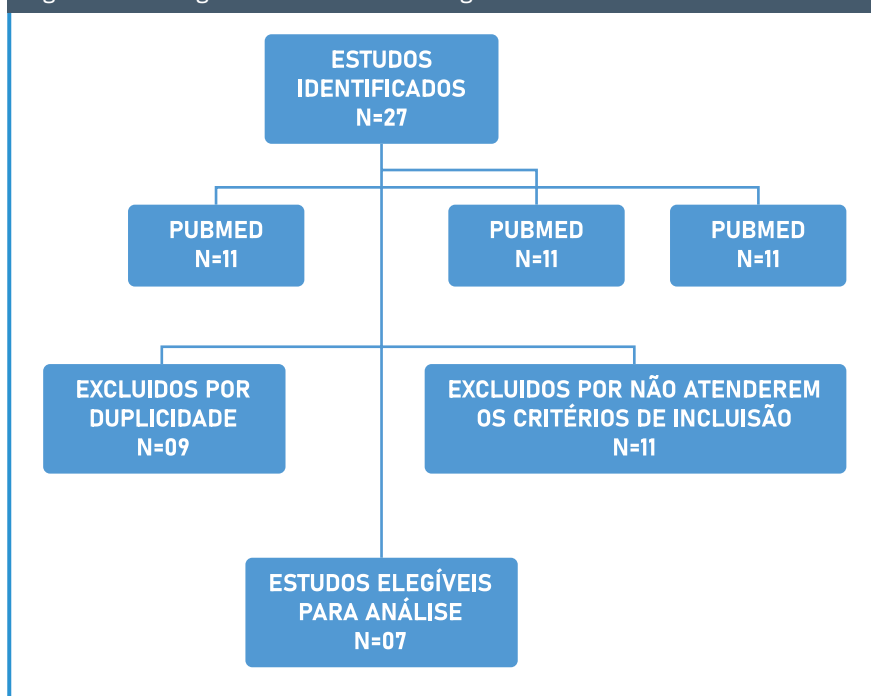
The present review included the inclusion of seven articles, three of which were clinical trials, three were randomized controlled trials and one was an observational study. All studies aimed to understand the effectiveness of acupuncture and some of its variations (acupressure, moxibustion and electroacupuncture) in reducing labor pains (Chart 1).

Regarding the pain intensity assessment method, most articles⁽⁵⁾ used a Visual Analogue Scale (VAS) as a tool, which is a subjective form of classification. In addition, the use or not of analgesics, mainly meperidine and epidural analgesia, was also used as a means of analyzing the potency of pain.

The selected studies also evaluated other variables related to acupuncture and labor, such as: duration of the active phase of labor, amount of oxytocin administered, adverse effects and patient satisfaction.

It was found that, among the articles, the main stimulus was Sanyinjiao, known as Spleen-Pancreas (Sp 6), res-

Figura 1 - Fluxograma de busca dos artigos



Fonte: Dados da Pesquisa, 2020.

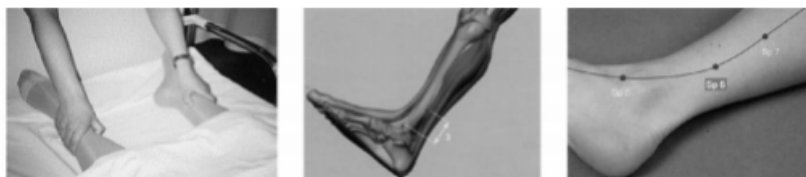
possible for the reduction of severe pain during uterine contractions. This point is located on the inside of the leg, 9,9 cm above the top of the ankle, just behind the bone (figure 2).⁽¹⁴⁾

Of the studies examined, only one concluded that there was no analgesic benefit with the use of acupuncture for the relief of labor pain at term in nulliparous women.⁽⁷⁾ All other articles found

that acupuncture has an analgesic effect on labor pains.

It was also possible to determine that acupuncture has a reducing effect on the duration of the active phase of labor and the amount of oxytocin administered.^(15,16) The patients' satisfaction with having used acupuncture as labor analgesia and the intention to receive acupuncture in future deliveries were also assessed by some articles. Most parturients were satisfied with the use of acupuncture as a relief from labor pains and were also positive in receiving acupuncture in the following pregnancies.^(1,16)

Figura 2: Acuponto BP6



Fonte: Mi-Kyeong Lee, 2003¹³.

Quadro 1 – Resumo dos estudos que utilizaram a acupuntura para a analgesia durante o parto. Maringá, PR Brasil, 2020.

ESTUDOS	AUTOR PRINCIPAL	AMOSTRA	INTERVENÇÃO	OBJETIVO PRINCIPAL	DESFECHOS SIGNIFICATIVOS
ESTUDO 1	Britt-Ingjerd Nesheim (2003)	Parturientes a termo N=198	Um grupo recebeu acupuntura e outro não	Avaliar a efetividade da acupuntura como analgésico durante Trabalho de parto.	A acupuntura durante o trabalho de parto reduziu a necessidade de outros analgésicos e tem alta satisfação do paciente A acupuntura por SP6 foi eficaz para diminuir a dor no parto e diminuir o tempo de parto
ESTUDO 2	Mi Kyeong Lee (2004)	Mulheres em trabalho de parto N=75	Mulheres em trabalho de parto foram aleatoriamente designadas para a acupuntura do SP6 ou grupo de controle de toque SP6	Avaliar os efeitos da acupuntura SP6 na dor do parto e no tempo de parto	A acupuntura por SP6 foi eficaz para diminuir a dor no parto e diminuir o tempo de parto
ESTUDO 3	Sedigheh Hantoush-zad h (2007)	Nulíparas N=144	Mulheres nulíparas saudáveis na fase ativa foram randomizadas para o estudo e grupo controle, recebendo acupuntura real e mínima, respectivamente.	Avaliar os efeitos da acupuntura em mulheres nulíparas durante o trabalho de parto em relação à dor, duração e aceitabilidade materna.	A acupuntura pode reduzir a experiência da dor, a duração da fase ativa e as unidades de ocitocina. Os pacientes foram satisfeitos e nenhum efeito adverso foi observado.
ESTUDO 4	IZ MacKenzie (2011)	Nulíparas a termo N=105	Estudo duplo-cego de manual, eletro e simulação acupuntura e estudo único-cego comparando acupuntura com um grupo controle para analgesia para indução do parto.	Avaliar o papel da acupuntura na analgesia do parto	Não houve benefício analgésico com o uso da acupuntura para o alívio da dor do parto a termo em nulíparas

ESTUDO 5	Jian-mei Cui (2011)	Primíparas em trabalho de parto N=60	As pacientes foram designadas de acordo com a sua escolha para três grupos: 1- Grupo que recebeu Mox no SP6 (S-Mox) 2- Grupo que recebeu Mox sem ponto de acupuntura 3- Grupo controle que não receberam Mox	Observar o efeito da moxabustão acuponto Sanyinjiao (SP6) (S-Mox) na duração do primeiro estágio do trabalho de parto e dor da contratilidade uterina em primíparas.	A aplicação do S-Mox poderia reduzir significativamente a fase ativa do primeiro estágio do trabalho de parto e diminuir o escore EVA da dor contrátil uterina, o que significa aliviando a dor causada pelo parto vaginal.
ESTUDO 6	Chris Dong (2014)	Nulíparas N=180	As pacientes foram alocadas em dois grupos experimentais (grupo EX-B2 e grupo SP6) e um grupo controle, cada um com 60 participantes elegíveis.	Avaliar os efeitos da eletroacupuntura em diferentes pontos de acupuntura no manejo da dor do trabalho de parto	A aplicação de eletroacupuntura nos pontos de acupuntura EX-B2 e SP6 pode ser usado como método não farmacológico para reduzir a dor no parto e encurtar a duração da fase ativa do trabalho de parto.

Fonte: Dados da Pesquisa, 2020.

DISCUSSION

The pain of labor depends on multiple factors and is linked to the individual characteristics of each woman. To assess its intensity, the clinical trials analyzed used the following resources: amount of painkillers used intrapartum (meperidine and epidural anesthesia)¹, duration of the active phase of childbirth² and amount of oxytocin used.³ In addition to these, scales were used, a more palpable method. In this sense, the most used scale was the Visual Analogue Scale (VAS).^(6,14,17) In addition to it, Martini used the simple scale of zero to ten as a way to estimate the pain of parturients.⁽¹²⁾

Neshein found that using placebo acupuncture would be a practice that is often considered utopian, as it requires irrational skills from acupuncturists to be able to make patients really believe they are receiving acupuncture. This fact, which can significantly alter the assessment of acupuncture analgesia.⁽¹⁾

Two studies analyzed the use of acupuncture in its basic form, using needles in acupoints during labor. Both Neshein and Hantoushzadeh concluded that acupuncture can reduce the experience of labor pain and also achieved high patient satisfaction.^(1,16)

In contrast to all other studies evaluated, a randomized controlled study carried out in an obstetric unit in the United Kingdom with 105 nulliparous women concluded that there was no analgesic benefit with the use of acupuncture for the relief of labor pain.⁽⁷⁾ However, the only parameter used to measure pain was the proportion of pregnant women who resorted to epidural analgesia. The study was not able to analyze the increase in the use of oxytocin, nor did it use VAS to know the percentage of individual pain in each woman.

In addition to acupuncture, some of its main variations (acupressure, electroacupuncture and moxabustion - thermal acupuncture) were also used in the studies analyzed. In the study by Kyeong Lee, the analgesic effects of acupressure on labor pain lasted at least sixty minutes in the group that actually received acupressure at point SP6, concluding that it is unlikely that this is a placebo effect, since the group control that received only the touch at point SP6 did not show greater reduction in pain.⁽¹⁴⁾

In the study concerning electroacupuncture, a significant difference was noted between the control and study groups in terms of pain relief during the active phase of labor, effects that can be

explained mainly by the stimulation and local release of endorphins by blocking the pain impulses in the brain, known as the gate theory.⁽⁶⁾

Following the same line, the study by Jian-mei Cui reveals that application of the S-Mox moxabustion method could significantly reduce the time of the active phase of the first stage of Childbirth and decrease the VAS score of uterine pain.⁽¹⁷⁾

This bibliographic review found relevance in also analyzing an observational study, a work that sought to answer the following question: "Do women, during normal labor, in a hospital environment receiving acupuncture require less epidural analgesia than those who do not receive acupuncture?". The answer found was that, in fact, the use of acupuncture was associated with a reduced use of epidural analgesia. They were associated with an increased use of epidural analgesia: being western, nulliparous and having an induced delivery. This result is in line with the results of this present bibliographic review, since the observational study reveals that individual characteristics of each woman interfere with greater use of epidural analgesia in parturient women.⁽¹⁸⁾

The review of the studies provides

a panoramic view of the movement to rescue naturalization of childbirth, since the number of women who choose to have their natural childbirth has been growing, which did not happen previously, mainly, due to the low employability of alternatives that cease the pain during labor.

This is due to a long process, both in the progress of medicine, as well as in the growth of female empowerment, which increasingly sees normal birth as a representation of the strength that a woman has. The present work is a tool to prove the effects of acupuncture as a way to help, encourage and convince women that it is possible to have a childbirth with little pain, consistently, based on real and serious researches used worldwide.

Many of the advances achieved in other countries contribute to an understanding of the issue in Brazil. However, the subject is still not widespread in our country, which emphasizes the importance of this review when bringing this discussion to the Portuguese language.

Most of the studies analyzed here used the Visual Analog Scale (VAS), which is a method of subjective pain assessment, but which gives reliability to the results.⁽¹⁹⁾ It is worth mentioning that research that uses personal experiences will always be subject to some problems, among them, the memory bias, the overvaluation of the event, fear, inhibition, among other aspects.⁽²⁰⁾

Some limitations for the construction of this review can be listed. First,

although the topic is widely debated and publicized in the lay media, there is a limited number of scientific studies published on the subject. Second, there is a considerable restriction on how to assess pain, as it is an issue that is very subjective and individual.

CONCLUSION

Acupuncture and its main variations addressed, acupressure, electroacupuncture and moxibustion - thermal acupuncture, demonstrate the potential to contribute to the relief of labor pains, both in intensity and duration. In addition, this method is able to relieve patients' mental suffering, so it is an instrument that provides a holistic view of parturients. ■

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