EFFECT OF BL32 ACUPRESSURE POINT ON LABOR PAIN: AN EVIDENCE-BASED CASE REPORT

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Abstract

Introduction: Among the methods to promote an anxiety-free childbirth process, painless delivery, and efficient labor pain management are needed. Acupressure is one of the non-pharmacological techniques that can be used to lessen labor pain.
Objectives: The aim of this study was to evaluate the available evidence on the effect of acupressure on the BL32 point in labor pain management.
Method: Advanced searching for literature was carried out in March 2023 using PubMed, Google Scholar, and Cochrane Library. An evidence-based case report of eligible participant was assigned to an acupressure therapy on the BL32 point to reduce labor pain. The primary outcome measure was labor pain intensity assessed using a Visual Analog Scale (VAS) before and after intervention.
Result: Three papers met the requirements and were fully accessible in relation to this study. Three publications demonstrated that acupressure on the BL32 is considered to have an effect on managing labor pain.
Conclusion: The application of acupressure on the BL32 point was considered to have an effect on managing labor pain in the first stage of labor.

Keywords: Acupressure, BL32, labor pain, pain relief, pressure point

INTRODUCTION

Normal childbirth process is a process that's done spontaneously, with a minimum risk, and the baby is born with a cephalic presentation when the gestational age reaches 37 to 42 weeks. Childbirth is the end of the pregnancy journey, marked by intense contractions in the uterus, which causes the cervix to dilate and the lower part of the fetus to descend through the birth canal. The labor process begins with contractions and ends with the birth of the baby and placenta. Intense contractions cause women in labor to feel pain.(1,2)

Labor pain is perceived by cervical dilation, uterine contraction, and the extension of the uterus for vaginal delivery. Poor labor pain management might be connected with physiological and psychological negative results. One of the negative consequences that might be caused by labor pain is anxiety. Anxiety can stimulate the sympathetic nervous system and release stress hormones like cortisol, noradrenaline, and adrenaline. These hormones can intensify the severity of labor pain and duration. Accordingly, discovering how to provide the feeling of calmness and pain relief coping mechanism with minimal complications, is one of the problems during labor.(3)

In order to help women cope with labor pain, healthcare providers are allowed to provide pain management with pharmacological or non-pharmacological methods. Due to their simplicity, cost-efficient, low risks, and popularity, non-pharmacological methods like acupuncture, birth ball exercise, music therapy, massages, relaxation techniques,

aromatherapy, and acupressure have been recognized as a leading area in midwifery care to maintain normality in labor pain management.(3) applying pressure to acupuncture points like acupressure, stimulates C fibers to prevent pain stimuli from reaching the cortex. Another theory says acupressure inhibits brain pain transmission by stimulating mechanoreceptors. Endorphin theory says that acupressure stimulates endorphin secretions like a natural analgesic.(4)

Based on a systematic review and meta-analysis article, said that acupressure can help decrease labor pain effectively.(5) There are some acupressure points commonly used in acupressure therapy during childbirth, such as SP6, LI4, BL67, and BL32.(4) In this study, the BL32 pressure point was selected to help with labor pain management. A study shows that the BL32 pressure point is more effective in decreasing labor pain levels than other pressure points like IG4, BL67, and LI4.(6) Therefore, the aim of this study was to evaluate the available evidence on the effect of acupressure on the BL32 point in labor pain management.

METHODS

Advanced searching was carried out using PubMed, Google Scholar, and Cochrane Library. Three articles were selected out of 160 articles found in the 3 databases. A literature search was accomplished using Boolean operators with the following keywords: “labor” AND (“acupressure BL32” OR “BL32 pressure point”) AND “labor pain”. These articles were then selected based on the inclusion and exclusion criteria. Inclusion criteria were as follows: published within the last five years (2019 – 2023), randomized controlled trial, systematic review, acupressure on the BL32 point, and labor pain. Exclusion criteria included: published using languages other than English, irrelevant studies, not accessible, and birth complication. The final three articles were then assessed using the Validity, Importance, and Applicability (VIA) method.

Subsequent to reading all three chosen articles as a whole, the respondent was given the intervention as mentioned in the article. The respondent in this case report met the criteria for vaginal birth, term gestational age, and no complications during pregnancy and labor.

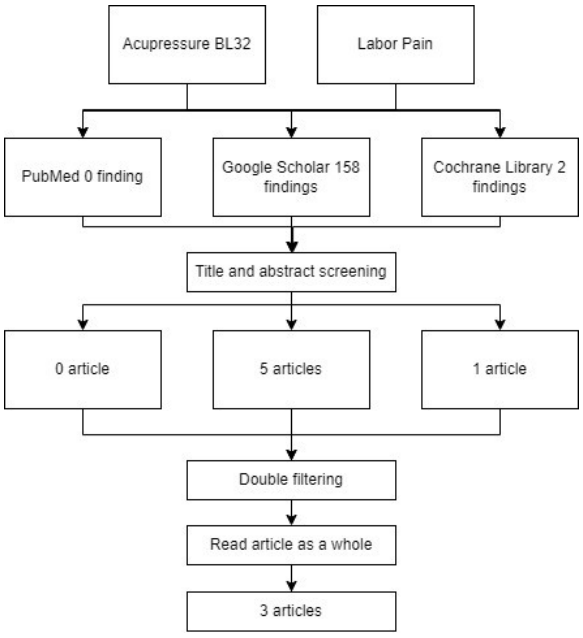

Figure 1. Flow Chart

A 28-year-old woman G3P2A0, whose gestational age was between 38 and 39 weeks, presented with severe contractions and bloody discharge ten hours prior, without any amniotic fluid, and the respondent was still feeling fetal movements. She was alert during the examination at 21.15 WIB, and her vital signs were all within normal ranges. During physical examination of the abdomen, the following findings were noted: symphysis-fundal height: 30 cm; Leopold I: buttocks; Leopold II: back (right); Leopold III: head has entered pelvic inlet; Leopold IV: divergent (2/5); hicks: 4x10'35"; fetal pulse: 130x/min, regular. Upon vaginal examination, mucus with blood was discharged and no indications of infections were found. The inspection revealed no anomalies in the vulva and vagina, as well as a firm perineum, soft thin portio, 7cm cervical dilation, intact amnionic membrane, head presentation, front left fontanelle position, molasses 0, and the lowest part of the fetus in station 0. The Visual Analog Scale (VAS) was used to measure pain before the intervention. The respondent let out a painful whimper, expressing helplessness and inability to endure the agony. Acupressure therapy administered on BL32 point every time she experienced contractions. Lastly, the respondent was asked about her pain level after the intervention using VAS.

RESULTS AND DISCUSSION

Labor pain is classified as one of the most severe pain syndromes. Thus, to prevent adverse effects on women and the fetus during labor, an efficient technique of pain management is crucial. Najafi, et al in a study found that acupressure is a useful technique for reducing pain during the initial stages of labor. That being said, the pain relief that follows this therapy is more noticeable in the minutes to hours following the procedure. In actuality, there is a rise in the intensity of pains throughout the transitional phase of labor in the first stage.(7)

Applying pressure to certain body locations to release tension in the muscles, enhance blood flow, and replenish the body's energy reserves is known as acupressure. The goal of acupressure is to facilitate the body's Qi energy flowing smoothly in order to encourage positive healing reactions. The essential energy known as qi is present throughout the universe and is present in every human being from birth. Acupressure contributes to the establishment of balance by regulating blood circulation and giving the body the qi energy it needs.(8)

In this study, the respondent was given an intervention by putting pressure on the BL32 point, in between the lower spine and the dimple of the buttocks. The pain intensity level was assessed using a Visual Analog Scale (VAS) to measure the outcome of the intervention.(9)

The respondent was given midwifery care by providing acupressure on BL32 point, carried out on March 9th, 2023 at UPT Puskesmas Garuda. First, the author took an approach so that the relationship can be established well. After that, the author explained the aims and objectives of implementing midwifery care so that trust was established and misunderstandings were avoided between the respondent and provider, as well as Mrs. L was willing to be given the intervention.

Before she was given the intervention, she was asked about her labor pain intensity using VAS. The client said the labor pain that she was experiencing was at 9 out of 10. The intervention was given while the mother was experiencing contractions, and acupressure was performed at the BL32 point. Before delivery, the mother was asked again about the intensity of the pain she was experiencing after the intervention was carried out. After the intervention, the mother said that the pain she experienced was reduced to 6 out of 10.

A randomized clinical trial by Akbarzadeh, et al found that applying acupressure at the BL32 point is a useful way to lessen the intensity of labor pain. In this study, the rise in dilatation during the initial stage of labor caused an increase in pain intensity for every

participant. However, the intervention groups experienced less intense pain than the control group. This difference was statistically significant (P<0.001).(10) The result of Akbarzadeh's study is in line with the result of the respondent's labor pain in this study where less pain was felt by the respondent after acupressure on the BL32 point was given. A Randomized Controlled Trial by Kirca, et al also said that acupressure administered at the BL32 point has an effect on managing labor pain intensity during the active phase (P<0.001). The study's findings showed that acupressure improved postpartum comfort for women by reducing labor pain.(11)

The gate control theory justifies the use of acupressure at the BL32 acupoint to reduce pain. It explains that during childbirth pain impulses will be transmitted by the nerves to the brain. Stimulation or pressure will cause faster and stronger opposite impulses delivered by small nerves to block pain impulses from going to the brain. Giving acupressure is expected to provide impulses to the spinal cord and result in segmental inhibition of pain impulses. These pain impulses will control the woman's perception of responding to pain. Meanwhile, if pain impulses reach the brain, it will cause the cortex center to change the pain experienced by the woman.(10,12)

According to the theory, mechanoreceptor activated by acupressure cause the thick fibers to contract, closing the door, while fine fibers contract, opening them. Depending on the pressure's intensity, the opening and closing doors symbolizes the pain's transmission via the nerves pr not. After that, the pain is no longer transmitted to the spine. To activate the thick fibers, some authors recommend mild massages in the lumbar region between contractions. This will help the woman receiving therapy feel less uncomfortable and less in pain.(13)

The gate control theory of pain also states that acupoints are the sites of sensory receptors found in the muscles' afferent fibers (A-delta and C-fibers). The sensory receptors are triggered and the stimulations are transmitted to the spinal cord when these locations are stimulated with a needle, pressure, or Transcutaneous Electrical Nerve Stimulation (TENS). This way, endorphin, and enkephalin are released by activating the spinal cord, midbrain, and hypothalamic-pituitary axis to produce their analgesic effects.(10)

Acupressure can reduce pain during labor effectively, related to circulation in reducing labor pain. When massaging the pressure points, the woman was distracted from the pain she felt.(5) Based on the endorphin theory, when you massage pressure points, you can release endorphin hormones. Endorphin hormones have properties like opium to reduce pain.

The pituitary gland produces endorphins, which are endogenous opioid neuropeptides that mainly act in the brain as a painkiller.(14) Endorphins are peptide or protein molecules that are produced in the pituitary gland from a chemical called beta-lipotropin. Furthermore, endorphins have an action on the brain's pain-sensing regions that is comparable to opiate medications like morphine. The neural system regulates the release of endorphins; since the nerves are sensitive to pain from outside stimuli, using acupressure techniques can stimulate them and tell the endocrine system to release the necessary amounts of endorphins.(15)

Every time the respondent in this case study had a contraction, she received acupressure at the BL32 point. The respondent's pain level, as determined by the Visual Analog Scale (VAS), decreased after intervention, going from severe to moderate pain. This is consistent with recent research that found that the BL32 point is more effective to reduce labor pain than the other acupressure points.(6) This also shows in another article from Fritiria and Annif, in their article shows that labor pain decreased after acupressure was given (P<0.05).(16)

CONCLUSION

Acupressure on the BL32 point showed an effect in managing labor pain, according to the three final studies that were selected: Systematic Review, Meta-Analysis, and RCTs study. The application of acupressure on the BL32 point was considered to have an effect on managing labor pain. This can be seen from the results of the examination regarding the reduction in the pain intensity felt by the mother before and after the intervention. However, further study is required to determine the effectiveness of a larger sample size.

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