

NON-PHARMACOLOGICAL TECHNIQUES IN LABOR PAIN MANAGEMENT

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ABSTRACT

Birth pain, which is acute pain, is one of the most severe types of pain known. However, this pain differs from other types of pain in that it is a part of a natural process, it occurs within a limited period time, and the mother's willingness to endure these painfully for her baby. Birth pain also adversely affects the woman's perception of labor. Failure to control birth pain causes pregnant women to perceive birth negatively, have negative experiences about birth, and decrease their satisfaction. Nonpharmacological methods affect the cognitive, emotional, behavioral, and sociocultural dimensions of the pain and lead the woman to perceive the pain at the lowest level by providing relaxation. The purpose of the methods used to relieve pain at birth is to directly reduce or regulate birth pain without any negative effects on the mother and baby. They do not slow down labor, there have no risk of side effects or allergies, they are very economical, comfortable, reliable, and easy to use.

Keywords: Birth; Birth pain; Nonpharmacological methods

Dođum Ađrısı Kontrolünde Nonfarmakolojik Yöntemler

ÖZET

Akut bir ađrı olan dođum ađrısı, bilinen en őiddetli ađrı türlerinden biridir. Bununla birlikte, bu ađrı, dođal bir sürecin bir parçası olması, sınırlı bir süre içinde ortaya çıkması ve annenin bu acıya bebeđi için katlanmaya istekli olması nedeniyle diđer ađrı türlerinden farklıdır. Dođum ađrısı kadının dođum algısını olumsuz etkiler. Dođum ađrısının kontrol altına alınmaması hamile kadınların dođumu olumsuz algılamasına, dođumla ilgili olumsuz deneyimlere ve memnuniyetlerini azaltmasına neden olur. Farmakolojik olmayan yöntemler ađrının biliősel, duygusal, davranıősal ve sosyokültürel boyutlarını etkiler ve gevőeme sađlayarak kadının ađrısını en düşük seviyede algılamasına yol açar. Dođumda ađrısını hafifletmek için kullanılan yöntemlerin amacı, anne ve bebek üzerinde herhangi bir olumsuz etki yaratmadan dođum ađrısını dođrudan azaltmak veya düzenlemektir. Dođum sürecini yavaőlatmazlar, yan etki veya alerji riski yoktur, çok ekonomik, konforlu, güvenilir ve kullanımı kolaydır.

Anahtar kelimeler: Dođum; Dođum ađrısı; Nonfarmakolojik yöntemler

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INTRODUCTION

Every woman has some expectations for labor. The most important of these expectations is less perception of birth pain. The focus of care in the delivery process today is not only to ensure a safe birth for the mother and baby but also to create a positive and satisfying delivery experience (WHO, 2018; Karabulutlu, 2014).

Labor Pain

Getting rid of pain has always been an area of interest since the beginning of humanity. The severity of pain is variable, but birth pain is a universal experience. Although birth is seen as a natural process, it can cause significant pain and discomfort. Labor pain;

Pain is part of a normal process: Birth pain is completely normal, while other pains indicate injury or illness. It helps the pregnant woman to make an effort to get rid of this situation and also to move on to the baby's birth.

There is time for preparation: The pregnant woman has time to prepare for childbirth, and within these periods she can develop skills to coexist with pain.

Birth pain is short-term and intermittent: Birth pain does not last for days, weeks, months, but ends within a few hours. The pain is not continuous but intermittent.

Acceptance of pain and cooperation with pain are high: Mobilizing emotions such as desire and cooperation towards pain, is more common during childbirth.

Two basic factors, generally physical and psychological, are effective in the formation of birth pain. Physical causes of birth pain include cervical tension, hypoxia due to decreased perfusion in the uterine muscles during contractions, pressure on the urethra, bladder and rectum, and distention in the pelvic floor muscles. Woman's past pain experiences, fatigue, pain expectation, positive or negative support systems, birth environment, cultural expectations, and emotional stress and anxiety levels can be effective on perception of pain (McKinney, James, Murray, Nelson, Ashwill, 2018; Leonard, 2002).

Today, there are many safe nonpharmacological and pharmacological options that women can use in combination or separately to accept pain at birth and to be associated with pain. Nonpharmacological methods; continuous support at birth, hydrotherapy, relaxation, spiritual/mental arousal, ambulation, position changes, acupuncture, acupressure, focusing attention, dreaming, therapeutic touch, massage, breath awareness, efloraj, etc. Pharmacological methods; systemic treatment with narcotic, sedative, tranquilizing and amnestic consists of regional and conduction anesthesia and general anesthesia etc. Non-pharmacological methods do not require medical rules. Nurses and midwives are in an ideal position to reduce the perception of birth pain to women by giving clear information on effective non-pharmacological and pharmacological methods. It is reported that pain should be evaluated in every patient who applies to a health institution according to the pain management standards published by JCAHO (Joint Commission on Accreditation of Healthcare Organizations). Therefore, nurses have knowledge of the latest scientific research on methods that reduce the perception of birth pain and about effective methods of reducing pain to women at birth (Mascarenhas et al., 2019; McKinney et al., 2018).

Non-Pharmacological Methods

The use of nonpharmacological methods is generally simple,

safe, and inexpensive. Many of these methods are taught in childbirth classes and women should be encouraged to try these various methods before their birth. In order to achieve good results in most of the methods, it is necessary to practice and work in harmony with the partner/birth supporter/doula. Non-pharmacological methods are harmless for mother and fetus. They don't slow down labor and there is no risk of allergies. Nurses/midwives should support and encourage women and their spouses for using non-pharmacological methods. Although women cannot consciously manage contractions that occur during childbirth, they can control how they respond to contractions and thus improve their sense of control at birth (Mascarenhas et al., 2019; McKinney et al., 2018).

Continuous Support at Birth

Continuous birth support requires the presence of someone who is constantly with the woman at birth and who gives her emotional support, provides comfort, protects, informs, offers suggestions, and supports. This continuous support can be provided by a woman's family, a midwife, a nurse, a trained birth supporter, or anyone close to her. A supportive person can help the woman move, walk, change positions, and use breath awareness practices. In birth having someone next to the woman has immeasurable value to make her feel safe (WHO, 2018; Smith et al., 2018).

Relaxation

Relaxation is very important in labor. Relaxation; accelerates blood flow to the uterus, provides fetal oxygenation, increases the effectiveness of contractions, reduces tension during pain, reduces fatigue, and protects energy, facilitates communication. To realize the relaxation reaction; providing a calm environment, empty bladder, comfortable clothes, emptied thoughts, and focusing on word, voice or sentence as a mental tool is very important. Common relaxation methods are progressive muscle relaxation, biofeedback, hypnosis, acupuncture, meditation, movement and position, sounding, and listening to music (Rathfisch 2012; Simkin & Boldig, 2004). In the Cochrane systematic review of Smith et al. (2018) which included 19 studies, it was observed that women using relaxation techniques had reduced labor pain.

Hydrotherapy-Bath

Warm water increases relaxation, reduces birth pain, lowers blood pressure, and increases diuresis. It is used to improve the process in the period of birth pain. The conduction of heat through the skin and mucous membranes release muscle spasm and pain relief. Especially, If labour is slow and painful, immersion in water is recommended as a form of relaxation because it reduces the adrenaline hormone and helps to release of endorphin and oxytocin. It is recommended to start hydrotherapy while the woman is in the active phase and usually limited to 1-2 hours. (Karabulutlu, 2014; Habanananda, 2004; Simkin and Boldig, 2004). In a study examining the effect of warm shower on birth pain, women who received hydrotherapy were found to have lower pain levels in the active phase (Lee et. al., 2013).

Application of Heat and Cold

Hot application in labor is used to relieve low back pain of the woman during childbirth. This application provides relief of muscle spasm and reduction of pain caused by stimulation of ischemia and large nerve endings. In hot application, different methods such as applying hot water bag/compress/water bottle/heated pads/warm blankets are used (Potur, 2010). Cold application should be preferred especially in the births in the

summer months when the heat is high. Cold application also prevents muscle spasm, reduces sensitivity in the skin, relieves tension in the joint. Therefore, sprinkling cold water on the woman's face, keeping the woman's hands in cold water, placing the cold water-cooled pads on the forehead of the woman, placing the ice pieces in a glove or bag to the woman's sacral area are also effective in pain relief. In hot weather. In experimental studies, it has been found that hot and cold application reduces pain at birth and is effective in shortening the 1st and 3rd stages of birth. (Behmanesh et. al., 2009, Ganji et. al., 2013; Mardliyana 2017).

Maternal movement and changes in position

Position changes can help speed up birth due to the positive effects of gravity and shape changes in the pelvis. It was determined that women felt less back and abdominal pain in standing or sitting position (vertical position) than flat or lateral lying position (horizontal position). Supin positions should be avoided because these positions can slow the progression of birth and reduce the return of blood to the heart by causing pressure on the vena cava. (Simkin, 2002; Karabulutlu, 2014). Walking, rocking, swaying, and other positions with rhythmic breathing improve labor progress, uses gravity during and between contractions, provides contractions to be more effective and painless, helps fetus take position compatible with mother pelvis angle (Figure 1) (WHO, 2018; Simkin, 2007). According to the Cochrane systematic review, the positions that allow upright and movement have been shown to be effective both in shortening the duration of the first phase of delivery and in reducing the pain of birth. (Lawrence 2013).

Acupuncture and Acupressure

Acupuncture and acupressure can be used for less perception of pain during childbirth. Acupuncture is a method that gives warning to key trigger points with needles. In Chinese medicine, this method has been practiced for nearly 3000 years. According to classical Chinese teaching, when the energy meridians or channels in the body are in balance, they can regulate their body functions. Pain reflects an imbalance or blockage in the flow of energy so the purpose of acupuncture is to reduce pain by rearranging energy meridians or channels. When alerted to the trigger points, it causes the release of endorphins and reduces the perception of pain (Mascarenhas et al., 2019; Karabulutlu, 2014).

Acupressure involves applying pressure or massage to the same trigger points with a fixed finger to reduce the pain sensation. The amount of pressure is important. The severity of the pressure is determined by the needs of the woman. There are some acupressure points on the spine, neck, shoulders, toes, and soles. Holding and squeezing the woman's hand at birth can stimulate the most commonly used trigger point for both techniques (Kömürçü, 2008; Ricci, 2017). In a randomized controlled study conducted by Ozgoli et al. (2017), women who received acupress in labor had less pain than the control group.

Hypnosis

Hypnosis has been used since 19th century to reduce birth pain. Hypnosis is a different state of consciousness that requires deep concentration. The woman does not sleep, but when the action begins, she becomes trans and continues until delivery is complete. It is an effective method but it is not convenient because it is not applied to a wide audience. This method requires a very time-consuming series of training sessions with the hypnotist. Hypnosis is a promising method to reduce birth pain and increase the satisfaction of pregnant

women during the painful period of birth. (Roberts et al., 2004). In a cochrane systematic review study, it was concluded that women who underwent hypnosis had lower pain levels (Madden 2016).

Focus Your Mind and Dream

Senses are used to focus on attention and dreaming. The woman can focus on tactile stimuli such as touch, massage or caress. She can focus on auditory stimuli such as music, listening or verbal support. Any object in the room can be a visual stimulus. Some women may focus on a mental activity such as a song, prayer, or counting down. Breathing, relaxation, positive thinking and positive visualization are very effective in mothers at birth. The use of these techniques prevents sensory impulses detected during contractions from reaching the pain center in the cortex of the brain. Nurses and midwives encourage women to enact to perform animation like "think of your baby acting in the birth canal", "think of your baby while moving down and out", "think of the expanding birth canal" (Smith et al., 2018; Kömürçü and Ergin, 2008).

Music

Music helps to reduce anxiety, cope with pain and supports mother-baby relationship, mother's courage and confidence. It helps the person by removing unpleasant painful stimuli, increasing the release of endorphins and initiating relaxation. Studies show that women undergoing music therapy have less anxiety, pain and discomfort during childbirth (Mascarenhas et al., 2019; Smith et al., 2018). In a randomized controlled study examining the effect of music on birth pain by Phumdoung and Good (2013), it was reported that listening music was well effective in relieving birth pain. (Phumdoung & Good, 2003).

Yoga

Yoga is the unification of body, mind and soul, merging with each other in harmony and becoming one. Today, it is frequently used as a relaxation method and its use is becoming more and more common in pregnant women. In a randomized controlled study that examined the effect of pregnancy yoga on the comfort of the mother, birth pain and birth results, it was seen that the comfort of the mother was higher and the delivery time was shorter in the experimental group after and after the birth control group. (Chuntharapat 2008). In the Cochrane systematic review of Smith et al. (2018) which included 19 studies, it was observed that pregnant women who practice yoga have less severity of birth pain and are satisfied with this practice.

Reflexology

Reflexology is one of the CAM methods used in different cultures for thousands of years. With this therapy method; Reflex points on the hands and feet corresponding to all parts, organs and systems of the body are manually stimulated. In this way, nerves and blood circulation in the body are stimulated and a holistic balancing treatment is performed. Reflexology application triggers the release of endorphins. Endorphins are natural pain relievers. In this way, it can make the woman feel birth pain less (Kaçar & Özcan, 2019). In a doctoral thesis conducted by Yılar (2014) found that women who underwent foot reflexology had lower pain scores at birth and the duration of the second phase of delivery was shorter.

Aromatherapy

More than 60 herbs are used in aromatherapy. Lavender oil, sweet orange oil, rose oil, jojoba oil, olive oil, geranium, salvia, juniper, jasmine, sandalwood, eucalyptus, and various incense are the best known aromatic plants. Especially

massaging with lavender oil or adding to bathwater, is the most preferred method. Because besides the scent of lavender, it has a strong antiseptic feature. In the literature, it has been reported that aromatherapy maintains relaxation that maintains body and soul balance, reduces anxiety, fear, pain, nausea and vomiting. Aromatherapy, especially roses, lavender, neroli, sage, etc. is applied in the form of inhalation of essential oils or rubbing on mother's skin during childbirth (Ergin and Malli, 2019; Simkin and Boldig, 2004; Cooke and Ernest, 2000; Kuriyama et al., 2005). According to the results of the meta-analysis conducted by Fei Chen et al. (2018), aromatherapy is effective in reducing birth pain.

Efloraj and Sacral Pressure

Efloraj is all light massages that are applied by sliding on the skin, do not cause pressure, and do not move deep muscle masses. It is applied as rhythmic caressing of the abdomen with breathing during contractions to help women. Regional pressure may be applied to reduce sacroiliac pain caused by stresses in the sacroiliac connective tissues. In the counter-pressure method (double hip pressure and knee pressure techniques) can be used for this purpose. Nurse/midwife/doula apply pressure toward the center while pressing her hips together (Figure 2). It is also used to relax and to distract attention from pain during contractions (Simkin, 2007; Karabulutlu, 2014).

Rhythmic Breathing and Moaning - Awareness Of Breathing

It is the most widely used comfort technique for childbirth. Rhythmic breathing and moaning (which is actually vocal breathing), along with relaxation, helps the woman relax, increases the woman's pain threshold, relieves uteroplacenta circulation. It always available in bed or out of the bed (Ricci, 2017; Rathfisch, 2012). According to WHO (World Health Organization) recommendations, health professionals should

- ✓ teach women to notice her normal breathing with

few and short commands

- ✓ encourage her to breathe out more slowly, making a sighing noise, and to relax with each breath.
- ✓ If she feels dizzy or feels pins-and-needles in her body, encourages her to breathe more slowly.
- ✓ prevent pushing at the end of first stage of labour and teach her to breathe with an open mouth, to take in 2 short breaths followed by a long breath out.
- ✓ during delivery of the head, ask her not to push but to breathe steadily. (WHO, 2015).

CONCLUSION

Pregnancy is an important life experience for the woman. Supportive care is extremely important for the baby and family. Pregnant support provided by using non-pharmacological methods facilitates the pregnant's use of its own power in action, adaptation, and communication with the newborn. If the woman is distressed by pain, WHO recommends that

- ✓ encourage the woman to move about freely, especially to be in an upright position
- ✓ focus on caring for the woman's emotional needs
- ✓ encourage the woman to wash or bathe or shower at the onset of labour
- ✓ teach the woman breathing techniques for labour by keeping rhythm
- ✓ encourage her companion to massage her back, hold her hand, sacral pressure, focus her mind and dream
- ✓ encourage the woman to have support from a person of her choice throughout labour and childbirth (WHO, 2017).

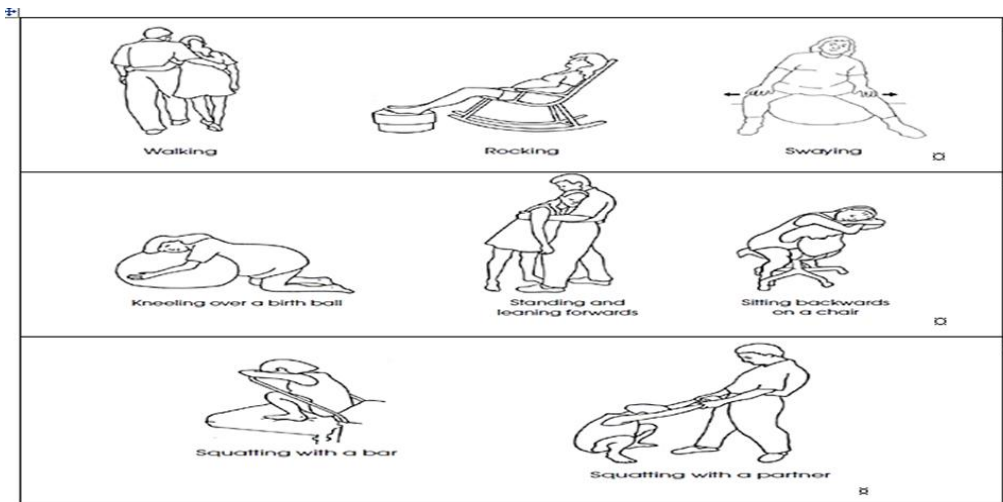


Fig 1. Maternal positions <https://evidencebasedbirth.com/evidence-birthing-positions/>



Fig.2. Double hip pressure <http://www.childbirthconnection.org/>

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