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The Effect of Endorphin Massage on the Intensity of Back Pain in Mothers During Active Phase I in Labor in Tegallega Village, Warungkondang District, Cianjur Regency, Indonesia

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A B S T R A C T

Childbirth is a physiological process or the process of expelling viable products of conception from the uterus to the outside world, thus enabling the mother to give birth to her fetus through the birth canal. There are several aspects related to pain during labor and can affect the birth process itself. Treatment uses non-pharmacological methods such as relaxation, warm compresses, yoga and one of which is using massage methods to reduce pain, one of which is back massage and endorphin massage. This study aimed to find out the effect of endorphin massage on the intensity of back pain in laboring mothers during the first active phase in Tegallega Village, Warungkondang District, Cianjur Regency. This study is an experimental research with a one group pre-test post-test design. This research only involves one group of subjects who will be observed before and after the intervention. The average intensity of pain before endorphin massage was given to mothers giving birth was 8.23. Meanwhile, the average value of the intensity of back pain in women giving birth after being given endorphin massage was 7.23. This shows that the intensity of back pain in mothers giving birth during the first active phase before endorphin massage was given to mothers giving birth during the first active phase in Tegallega Village decreased. There is an effect of giving endorphin massage on the intensity of back pain in mothers giving birth during the first active phase.

1. Introduction

The process of childbirth is one of the most significant moments in a mother's life. In addition to bringing joy, this process is also accompanied by various feelings of discomfort and pain. One method used to treat this pain is endorphin massage. Endorphin massage is a form of manual therapy that aims to stimulate the release of endorphins in the body. Endorphin is a natural hormone produced by the body and has an analgesic or pain-relieving effect. This hormone works by binding to receptors in the brain that are responsible for reducing the perception of pain. Therefore, endorphin massage is an attractive option in pain management, especially in postpartum women. In some areas, such as Tegallega Village, Warungkondang District, Cianjur Regency, Indonesia, endorphin massage has become an integral part of maternal care practices. This method has been passed down from generation to generation and is believed by the local community to have real benefits in helping mothers in labor overcome the discomfort and pain often experienced during childbirth. Endorphin massage is not only about relieving pain but also involves touch and attention, which can provide a sense of physical and emotional comfort for the birthing mother. Therefore, research on the influence of endorphin massage on the intensity of back pain in mothers in labor is an important topic, as it can

provide a more scientific view of the benefits of this practice in caring for women in labor and ensuring that their birth experience goes better.[1-5]

There are several aspects related to pain during labor, and can affect the birth process itself. The main effect that occurs is due to the triggering of the sympathetic system, where there is an increase in plasma levels of catecholamines, especially epinephrine. The pain caused by childbirth can be concluded as psychological suffering, fear, and anxiety. Cardiovascular, namely increased cardiac output, increased blood pressure, increased pulse frequency, and systemic peripheral resistance. Neuroendocrine, namely stimulation of the sympathoadrenal system, increases plasma levels of catecholamines. Mothers who are about to give birth respond to pain in different ways. Some mothers may feel afraid and anxious, while others are tolerant or optimistic. Some mothers cry, moan, scream, refuse help, or move aimlessly when experiencing labor pain. Pain in labor is caused by contractions of the uterine muscles; contractions tend to be felt in the lower back at the beginning of labor, and the sensation of pain encircles the lower body, including the abdomen and back. Contractions generally last around 45 to 90 seconds. As labor progresses, the intensity of each contraction increases, resulting in greater pain intensity.[6-9] This study aimed to see the effect of endorphin massage on the intensity of back pain in laboring mothers during active phase I in Tegallega Village, Warungkondang District, Cianjur Regency, Indonesia.

2. Methods

This study is experimental research with a one-group pre-post-test approach and uses primary data, namely in the form of measurements of the pain intensity of research respondents. A total of 30 research subjects took part in this study, where subject research has fulfilled inclusion criteria. The inclusion criteria in this study were mothers who experienced childbirth in Tegallega Village, Warungkondang District, Cianjur Regency, Indonesia. Pain intensity assessment was carried out using the numerical rating scale (NRS). The NRS assessment was carried out before and after intervention in the form of endorphin massage. Data analysis was carried out using SPSS version 25 software. Univariate and bivariate analyses were carried out in this study. Univariate analysis was carried out to present the frequency distribution of each test variable, and bivariate analysis was carried out to determine the relationship between the test variables, with a p-value <0.05.

3. Results and Discussion

Table 1 presents the effectiveness of the pre and post-test interventions. This study shows that the intervention of giving warm compresses is effective in reducing pain intensity in dysmenorrhoea sufferers. There was a decrease in pain intensity after giving a warm compress, and it was stated to be statistically different, p<0.05.

Table 1. Effectiveness of pre and post-test interventions.

Variable	Pre-test	Post-test	P-value*
Numerical rating scale	8,23±0,31	7,23±0,56	0,001

*T-test dependent, p<0,05.

Endorphin massage refers to a type of massage specifically designed to stimulate the release of endorphins in the body. Endorphins are natural chemical compounds produced by our body's nervous system and function as neurotransmitters. They act as natural pain relievers and also create feelings of

pleasure or euphoria. Endorphin massage aims to increase the production of these endorphins to reduce stress, improve mood, and relieve body aches. Endorphin massage can be done using various massage techniques, such as finger massage, pressure massage, reflexology, or other massage techniques. The important thing is that this massage is done gently and pleasantly so that it stimulates the nervous system and relieves tension. Endorphin massage can help reduce stress and anxiety, improve mood, and relieve body aches. It can be an effective tool for treating problems such as muscle pain, tension, or mild depression. During an endorphin massage, gentle touches on the skin stimulate the nerves beneath the surface of the skin. It stimulates the release of endorphins by the central nervous system in response to these stimuli. The endorphins released can provide feelings of relaxation and euphoria.[10-12]

Endorphin massage involves gentle massaging of muscle tissue, skin, and other tissues. This gentle touch stimulates the nerves beneath the surface of the skin. It stimulates the release of endorphins from the central nervous system in response to these physical stimuli. Endorphins are neurotransmitters that act as natural pain relievers in the body. When endorphins are released, they interact with nerve receptors around the stimulated area. This reduces the perception of pain and produces a feeling of relaxation. Endorphin massage can also increase blood circulation in the stimulated area. It helps in reducing inflammation and improving oxygen supply to injured or strained tissues. Decreased inflammation and increased oxygen supply can reduce pain. When tense muscles are relaxed through massage, it can reduce the pressure and tension that often causes pain. Massage can help remove muscle knots and increase muscle flexibility. Endorphin massage can also influence someone's mood. The increased mood and feelings of euphoria caused by the release of endorphins can divert attention from the pain being felt. Endorphin massages are often very relaxing. This sense of relaxation can help reduce stress and anxiety, which in turn can reduce the perception of pain.[13-15]

4. Conclusion

There is an effect of giving endorphin massage on the intensity of back pain in mothers giving birth during the first active phase.

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