



International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

IJAMSCR | Volume 7 | Issue 3 | Jul - Sep - 2019
www.ijamscr.com

ISSN:2347-6567

Research article

Medical research

Massage effect of pressure on speed counter opening on stage I labor primigravidae

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ABSTRACT

Background

Pain during childbirth is one factor that led to the mother felt that childbirth is painful and frightening events. Non-pharmacological techniques that can reduce pain and speed up the opening of the delivery of which is counter pressure massage.

Purpose

To determine the effect of massage counter pressure against the opening speed in the first stage of labor primigravidae.

Method

Experiment with Quasi experimental design with pretest-posttest design with control group design. Samples were taken from the mother inpartu the active phase of the first stage with the opening of 4cm. These samples included 42 respondents with purposive sampling technique. Analysis of the data using Mann Whitney and Wilcoxon signed rank.

Research Result

Showed no effect of massage counter pressure against the opening rate ($p = 0.000$), Provision of counter pressure massage can speed up the opening of the labor primigravidae.

Conclusion

Provision of counter pressure massage can speed up the opening of the labor primigravidae.

Keywords: Massage counter pressure, the speed of opening, primigravidas

INTRODUCTION

According to data from the World Health Organization (WHO) maternal mortality rate (MMR) in the global world, at 216 per 100,000 live births and nearly 50% higher than in southeast Asia AKI se that is 164 per 164,000 live births in 2015 [2]. Demographic health survey of Indonesia (IDHS) that is equal to 359 per 100,000 live births, but the

target is still very much the target of Sustainable Development Goals (SDGs) that is 70 per 100,000 live births in 2030 [3], Most deliveries (90%) with pain, while the labor pain is a physiological process [4].

Prolonged labor causes emergency in the mother and fetus, so the handling is carried out by inducing persalinan⁷. Induction of labor incidence of about 20% is a common

procedure performed on the birth process but can also increase morbidity in the mother and baby. In the fetus will result in the caput succedaneum and molasses janin8 head.

Non-pharmacological method is an alternative to accelerate childbirth namely massage counterpressure that can be used as a natural labor induction that affect the speed of opening without causing adverse effects such as drug delivery farmakalogi. Based on the background and identify the problem, then the purpose of this study was to analyze the intervention massagecounter-pressure affects the speed of the opening of the first stage of labor primigravidae.

Research methods

This type of research is quasy experimental with pretest-posttest design with control group. Samples were primigravida birth mothers who gave birth in the Regional General Hospital and Health Center, Brebes Brebes on month from March to April 2019. In the sample amounted to 42 people were determined by purposive sampling. Samples were divided into two groups: intervention and control the amount of each 21 people. Collection interview and observation data. Analysis of the data using the Wilcoxon Signed Rank test, and Mann Whitney Test.

RESEARCH RESULT

Table 1. Distribution of confounding variables

No.	characteristics	Group		p value
		Intervention	Control	
1.	Age (Years)			
	mean	24.67	23.81	.930
	SD	2.97	2,73	
	median	25	23	
	< 21 years	4.8%	0.0%	
	21-25 years	47.6%	76.2%	
	26-30 years	42.9%	23.8%	
	31-35 years	4.8%	0.0%	
2.	Education			
	SD	52.4%	23.8%	0.177
	SMP	28.6%	38.1%	
	High School	19.0%	28.6%	
	D3	0.0%	9.5%	
	total	100	100	
3.	Work			
	IRT	47.6%	71,4%	.209
	entrepreneur	52.4%	28.6%	
	total	100	100	

Source: The Chi Square test

Based on descriptive analysis Table 4.1 in the intervention group mean age of respondents maximum of 24.67 and mostly in the age group between 21-25 years. in the control group gained an average age of 23.81 and mostly in the age group between 21-25 years. The test results obtained independent t test p value of 0.336 means that there is no age difference between the intervention group and the control group. This means that the analysis can be continued for all groups have the same characteristics of the sample

The result of the distribution of confounding variables based education in the intervention group are mostly elementary school (SD) of 52.4%. in the control group: mostly high school (SMA) as much as 28.6%. Results of statistical test Chi Square p value of 0.177 means that there is no educational differences between the intervention and control groups, which means that the study sample was taken from the same characteristics between the intervention and control.

The result of the distribution of confounding variables based jobs available in the intervention group mostly Self as much as 52.4%. in the control group the majority of work is as housewife Domestic 71.4%. The results of the statistical test Chi Square test p

value of 0.209 means that there is no difference in the type of work between the intervention and control groups, which means that the data came from the same subject characteristics

Dependent Variable Analysis

Normality Test Data

Table 2. Results of Normality Test

No.	variables	Group	Sig	Distribution
1.	opening speed	Intervention	0,006	Abnormal
		Control	.219	Normal

Sources: Primary data, processed in 2019

At the opening speed data intervention and control groups after acupressure and massage counter pressure obtained p value of 0.006 in the intervention group and the control group p

value of 0.219, one of the data they are abnormal, further analysis using Mann Whitney

Table 3. The difference in the speed of opening of the intervention group and the control group

	Group	mean	Std. deviation	Delta	Z count	value P
Speed	Intervention	290.48	36.67	64.762	-4.833	0,000
opening	Control	355.24	30.10			

Source: Mann Whitney

Based on the above table it is known that there are differences in the average speed of the opening between the intervention and control groups with ap value of 0.001 is less than 0.05. The average speed of a faster opening of the intervention group, compared with the average speed of the opening of the control group. So the counter pressure massage treatment can shorten the first stage of cervical dilatation the active phase of labor primigravidae.

DISCUSSION

Effect of Massage Counter Pressure against the opening of Speed

Cervical opening speed is affected one by contractions of the uterus, the intervention counter pressure massage can increase the secretion of the hormone oxytocin. The hormone oxytocin plays an important role during labor with increasing oxytocin receptors in uterine smooth muscle, the muscle of the uterus more sensitive to oxytocin stimulation [11].

The mechanism of counter pressure massage technique using the gate control theory of pain information that depends on the balance of sympathetic nerve activity along the spine columna that can inhibit pain stimuli to the brain in addition to smooth the flow of energy also enters the spinal cord through the thoracic lumbar 10-12 to 1 to reduce pain intensity confinement and release the hormone oxytocin plays a role in the increase in contraction uterus [13].

Mechanical massage counter pressure aims to improve blood circulation, stimulate contractions to help the cervix to ripen and wide which gives specific pressure ketitik sensitive covering her body, no pills, drugs or needles are used, as well as the emphasis on using the heel of the hand to massage the lumbar region during contraction and reducing the sensation of pain and transmit pain impulses to the brain, and balancing the flow of qi energy so that the body will decrease pain, on measures to provide such interventions can be done respondent position half sitting or lying down as per convenience mother's mother. At the counter pressure massage technique does

not require a lot of tools, does not require any cost, and it has no side effects, and can provide a comfortable relaxation effect.

This is consistent with the theory that massage techniques at the stage of active phase of labor causes increased uterine contractions thus shortening the active phase. Emphasis counter pressure massage reduces pain during labor, psychological support, reduce anxiety and increase oxytocin [15].

The first stage of the active phase starting from the opening of 4 cm to the complete opening of 10 cm, normally according to the guidelines partograf this phase takes approximately 6 hours, this research is reinforced by Endang, 2014 that in fact a lot of factors that affect the progress of labor, but how to respond to pain in primigravida vary with the fear and anxiety that cause secretion ketokolamin (epinephrine and norepinephrine) that inhibits the opening of the cervix, ditunjukkan most mothers ibersalin active phase of the first stage of labor is not more than 6 hours (360 minutes) [28].

The research found that the counter pressure massage can increase the speed of opening of the first stage of labor inpartu mother primigravidae at the Regional Hospital of Brebes. Opening speed in the first stage of labor primigravidae judged from partograf sheet before being treated in the intervention group average mean (290.48) faster than the control group mean (355.24). So the counter pressure massage treatment can shorten the time of the opening of the first stage of labor inpartu mother primigravidae at the District General Hospital Brebes.

Nadia research results, Maya Tias Endarti 2016, indicating a counter pressure massage significantly with $p < 0.05$ and can accelerate progresslabor. a menyebarkan study, mothers who are given massage 30-40 times every hour during this stage of labor will further reduce the pain and make the mother feel calm. this is

because massage stimulates the body to release endorphins compounds that can relieve pain in alamiah.⁷ It uses the basic theory of Opiate endogenous, where opiate receptors located in the brain and spinal cord determines the central nervous system to activate the morphine substances called endorphins and enkephaline when pain is accepted, it can be stimulated endogenous Opiate expenditure by skin stimulation through massage. Opiate receptors are located on sensory nerve endings perifer¹³.

Massage and a strong pressure in addition to providing a block on pain transmission, can also enable endorphine or natural antidote compound in descending control system and create muscle relaxation so that the pain was reduced and an increase in uterine and cervical opening kotraksi more cepat¹⁶.

CONCLUSION

Intervention massage counter pressure as much as 30-40 times during the stages of labor primigravidae effect on the acceleration opening stage I.

SUGGESTION

For Medicals As input for health workers, especially midwives in midwifery service development to accelerate the progress of labor in primigravida to provide counter pressure massage intervention. As medical considerations in speeding up the opening of the first stage of labor primigravid and can minimize the use of pharmacological interventions.

The results of this study can be used as resources in developing further research on the effectiveness of massage counter pressure to the intensity of pain in stage II, III, IV after the massage counter pressure in the first stage I. The need for teaching strategies such as modules and other skills development programs.

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How to cite this article: Sestu Iriami Mintaningtyas, Suharyo Hadisaputro, Rr, Sri Endang Pujiastuti. Massage effect of pressure on speed counter opening on stage I labor primigravidae. *Int J of Allied Med Sci and Clin Res* 2019; 7(3): 885-890.

Source of Support: Nil. **Conflict of Interest:** None declared.