

THE EFFECT OF OXYTOCIN MASSAGE IN THE BREAST MILK PRODUCTION OF POSTNATAL PATIENT WITH CAESAREAN SECTION

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Abstract

Most of postnatal patient has problem in breastfeeding the newborn, especially for the section caesarean case. Researches show fewer women breastfeed their baby after having had a caesarean. Stress tends to delay lactogenesis, routine protocols and medicines interfere breastfeeding initiation and decrease supply. It need appropriate intervention such as oxytocin massage. This study aimed to know the effect of oxytocin massage in the breast milk production of postnatal patient with section caesarean. This study applied a quasi-experimental with post test only design with control group. Thirty two participants divided in to two group; experimental and control group. The experimental group received 15 minutes oxytocin massage. The result of this study showed that oxytocin massage has significant effect in breast milk production ($p=0.000$).

Keywords: Oxytocin massage, breastfeeding, section caesarean

BACKGROUND

In the last years, there is a tendency that caesarean delivery rate has risen. Approximately, caesarean section rate reach 18.5 million cases per year worldwide. Indonesia as a developing country has lower caesarean section rate which is 6.8%. However it is steadily increased (Gibbons, et al, 2010)

Caesarean delivery rate defined as a life saving procedure both for the mother and the baby through laparotomy, incision in the abdominal wall, or hysterectomy, incision in the uterus wall, in order to give a birth for the baby. Various reasons for caesarean delivery are proposed, such as

fetal distress, prolonged labor, pre eclampsia and narrow pelvis (Sumelung, Kundre & Karundeng, 2014). Another factors that must be consider are hypertension, obesity, gestasional diabetes, previous sterility treatment and the increase in age of childbearing (Kolben, 2009).

Caesarean delivery as the result of some health problems in pregnancy has negative consequences in maternal and child health. Long term risks and complications of this procedure are intrauterine death, placenta previa, placenta accrete/ increta, and uterine rupture (Endah & Masdinarsah, 2011). In addition, respiratory complications can be happen in newborn with caesarean section.

Significant thing that is disturbed after caesarean section is breastfeeding.

Actually the mother should feed the newborn within the first hour after birth with colostrums, the yellowish, sticky breast milk produced at the end of pregnancy. In post natal patient with section caesarean, this initiation of breastfeeding can be delayed. Stress tends to holdup lactogenesis, routine protocols and medicines interfere breastfeeding initiation and decrease supply (Bobak, Lawdermilk, & Jensen, 2005).

The mother can breastfeed their baby naturally. However, most of post natal patient with caesarean delivery case reports; they have some health issues following the surgery. They are pain, disturbance of tools, and immobilization. This condition leads to breastfeed difficulty (Anisah, Mursiyam & Anggraeni, 2010). It needs support from family and health care provider. One of post partum care is helping patient to start breastfeeding (Firman, Yuli & Koentjoro, 2011).

As the problems in breastfeed the baby, post natal patient with caesarean delivery rate needs specific intervention in breastfeed their baby such as oxytocin massage. Oxytocin massage is a rubbing process in spinal cord area; start from fifth until sixth nerves until scapula. Massage-like stroking induces acute antinociceptive

effects that can be reversed by an oxytocin antagonist. This will lead to the oxytocinergic system (Lund, et al, 2002).

Oxytocin acts on the breast to let down the milk as the baby sucking. Oxytocin is produced by the posterior pituitary. Stress and emotional distress may inhibit the let down reflex (Sherwood, 2006).

The purpose of this study is to know the effect of oxytocin massage in the breast milk production of postnatal patient with section caesarean by comparing between two groups, those one who received the oxytocin massage and those who were not.

METHODS

Design: This study applied a quasi-experimental with post test only design with control group to evaluate the effect of oxytocin massage in breast milk production.

Sample: The sample had been taken from Pekanbaru Medical Center (PMC) Hospital. The Director of PMC hospital as the head of academic quality control division in PMC private health school granted permission for researcher to do the study at The Anggrek Room which is a maternal and infant room care. This study used non probability sampling by took all subjects which were acquired inclusion criteria known as consecutive sampling. The inclusion criteria were: post natal

patient who was following the caesarean section, not experiencing any complications, and compos mentis mental status. A convenience sample of 32 participants divided in to two groups; 16 were assigned to the experimental group and 16 were assigned to control group.

Instrument: Data was obtained through the researcher developed instrument. The first part of instrument was used to collect demographic characteristic of the mother: age, paritas, ethnicity and educational level. The other part of the instrument was the result of breast milk measuring.

Tools that were used in procedure were baby oil for massage. In order to measure the breast milk production of mother, researcher used breast pump and syringe as measuring cup. As a guide in doing the massage, researcher made standard operational procedure form.

Procedure: All potential subjects were given both written and oral information about the purpose of the study that give positive impact in breastfeeding. Researcher stated that their identity and data would be kept confidential and anonymous. The subjects that was agreed to be sample divided in to experimental or control group.

Those in the experimental group received three sessions of oxytocin massage, 5 minutes each session, so that they got 15 minutes massage. The first session were done around 24 hours after the caesarean delivery process, the second one 12 hours following and the last session were done 12 hours after the second one.

The breast milk of the mother was taken after the third session of oxytocin massage and was calculated in measuring cup in experimental group. Those in the control group did not receive any treatment, the researcher measured their breast milk around 48 hours after the caesarean delivery process so that the experimental and control group was homogeny sample.

RESULTS

The data was available for 32 participants: 16 in experimental group and 16 in control group.

Characteristic of sample

N	Variable	Expe-		Con-		Total	
		riment	trol	F	%	F	%
		f	%	F	%	F	%
1	Age						
	<20 yr	1	7	0	0	1	3
	20-35 yr	10	63	9	56	19	60
	>35 yr	5	30	7	44	12	37
2	Paritas						
	First	10	63	8	50	18	56
	Second	4	25	4	25	8	25
	Third	2	12	3	19	5	16
	Forth or >	0	0	1	6	1	3
3	Ethnic						

N	Variable	Expe- riment		Con- trol		Total	
	Minang	9	56	5	31	14	44
	Malay	6	37	7	44	13	41
	Javanese	1	7	1	7	2	6
	Batak	0	0	2	12	2	6
	Etc	0	0	1	7	1	3
4	Education						
	Elementary	2	12	3	19	5	16
	Junior high	1	7	1	7	2	6
	High school	7	44	8	50	15	47
	Diploma	2	12	1	7	3	9
	Bachelor	4	25	3	19	7	22

The characteristic of the samples both control and experimental are same, there is no significant differences. The majority of the subject in both groups was early adult (56%), prior delivery case (56%), and finished high school level of education (47%). However, the ethnicity of most of experiment group was Minang (56%) and most of control group was Malay (44%).

Mean differences of breast milk (cc) between experimental and control group

Variable	N	Mean	SD	SE	P value
Experi- mental group	16	21.7	4.7	1.2	0.000
Control group	16	12.5	3.9	1	

The average breast milk production in control group was 21.7 cc and in experimental group was 12.5 cc with

standar deviation 4.7 cc. The independent t-test showed that the oxytocin massage has significant effect in breast milk production with *P value* 0.000.

DISCUSSION

This study showed that oxytocin massage has significant effect in breast milk production. According to Guyton (2007) that massage in spinal cord induces hypothalamus in hypose posterior. It gives relaxation effect and releases oxytocin hormone so that affect breasts to eject the milk.

After three sessions of oxytocin massage in a day (24 hours), researcher measured the breast milk production of the samples. It is showed differences between experimental and control group. The average of experimental group was much higher than control group which was 21.7 cc and 12.5 cc.

Another research showed that breast massage induces milk let down reflex. Researcher prefers to massage the spinal cord rather than breast. Lund, et al, (2002) state that stimulation of spinal cord especially nerves 5- 6 will accelerate the parasympathetic nerves so that influences the oxytocin hormone releasing. It needs 6-12 hours at least to get the effect.

Researcher waited 24 hours after the first session of oxytocin massage in

experimental group to measuring the breast milk of the samples. The first session was taken 24 hours after delivery process. In control group, researcher waited for 48 hours after delivery process so that both control and experimental group in same state at first (homogeneity).

In order to know the effect of oxytocin massage, researcher conducted an independent t test to see the differences between experimental and control group in breast milk production. The result revealed significant difference was present (p value= 0.000).

CONCLUSION

The conclusion of this research is the oxytocin massage has significant effect in breast milk production with P value 0.000.

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