

Spiritual Endorphine Stimulation as Methods to Increase Fetal Well Being on Pregnant Woman with Early Premature Rupture of Membranes

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Abstract: The membrane rupture before the process of giving a birth starts can cause health problems. The possible health problems to the fetus can be in the form of a well being disorder. This study is aimed to investigate the effect of Sipiritual Endorphine Stimulation on the increasing of the fetus well being to the mother with the early membrane rupture at Islamic Sultan Agung hospital Semarang. The method The population in this study is the overall pregnant women who experienced premature rupture of membranes. This research used quantitative with pra experimental pre post test design with one group on 19 respondents taken by accidental sampling. The intervention was in the form of reciting holy Qur'an, given through auditoric stimulation for 30 minutes.. Data analysis was performed by using wilcoxon test. The result shows that the p value was 0.003. Discussion: auditoric stimulation was accepted by the brain in the Midbrain section, then it stimulated the Midbrain to release Gama Amino Butyric Acid, enkepalin and beta endorphin which function as electrical conductivity inhibitors, have analgesic effect and act as relaxation making the heart rate more regular and the blood circulation run more smoothly. In conclusion there is a significant effect of Spiritual Endorphin Stimulation on the fetus well being to the mother with the early membrane rupture.

1 BACKGROUND

Early premature rupture of membranes is a condition of rupture of the membranes before delivery begins and may also occur late in pregnancy or well before delivery time (Mackeen, Seamon, Muhammad, Baxter, Berghella, 2014). A rupture of membranes is called preterm premature membranes if rupture membranes are before age 37 weeks of pregnancy, while prolonged rupture of membranes is the rupture of the membranes that occur more than 12 hours before delivery (Lowdermilk (2011).

Premature rupture of either preterm or prolonged fetus is very dangerous for both mother and fetus because it is one of the factors causing asphyxia neonatorum and infection (Endale, Fentahun, Gemada and Hussien, 2016). Feffixia neonaturum occurs due to the interruption of oxygen transported from mother to fetus so that there is disturbance in the supply of O₂ and in removing CO₂ (Hofmeyr, GJ, et al. (2008). The response that occurs in the fetus to an

amniotic mother is premature tachycardia (Ken Mizaki, 2012).

The condition experienced by the fetus in mothers who experience premature rupture of membranes is very dangerous and can cause pain and death during the perinatal period (Fatemeh Tavassoli, 2010). This condition requires prompt and appropriate treatment to prevent fetal harm. Research conducted by Arisa Fujiwara in 2013 at Kyushu University Hospital, Kyushu Kouseinenkin Hospital, Kitakyushu Municipal Medical Center and Oita Prefectural Hospital stated that a fast and appropriate management strategy could minimize the risk of complications in neonatal (Arisa Fujiwara, 2013).

Meanwhile, in a study conducted by Janae M. Davis in 2008 mentioned that the fetus in pregnant women with premature rupture of membrane experience prolong bradycardia, decreased variability, not reactive and distres, the researchers stated that it needs action to reduce the stressor experienced by the fetus and monitoring regular to the condition of fetal can be well-being.

Efforts that can be done by the nurse to reduce the stressor one of which is by doing Spiritual Endorphine Stimulation (SES). This method is a way to stimulate the endorphine contained in the body that is done by way of Auditory stimulation using the recitation of the Qur'an (murotal). Endorphine improves feelings of relaxation, and diverts attention from fear, anxiety and tension, improves the body's chemical system so as to reduce tension, pressure, heart rate, pulse, and brainwave activity (Stopler, 2013).

Preliminary survey conducted at Sultan Agung Islamic Hospital in January 2016 got data of pregnant mother with early rupture membranes counted 19 people. Of the 19 patients, 10 fetuses have tachicardi, 4 people have bradycardi fetus and 5 fetuses experience variability disorder.

2 METHODS

This research used pra experimental pre post test design with a one group (Notoatmojo, 2005). In this study, researcher provides Spiritual Endorphine Stimulation (SES) to determine whether there is influence on the well being of the fetus in pregnant women with premature rupture of membranes. The population in this study is the overall pregnant women who experienced premature rupture of membranes in January 2016 at Sultan Agung Islamic Hospital Semarang with a total of 19 people. The number of samples were taken the whole and conducted by using accidental sampling.

Respondents in the study were given spiritual treatment of endorphine stimulation by listening to Quran recitation for 30 minutes. Assessment of fetal well being including heart rate and fetal movement is done pre and post intervention. Measurement of fetal heart rate using dopler while calculating fetal movement is done by counting the number of fetal movement for one hour. Data were analyzed by using Wilcoxon test

This research has passed the ethical clearent by the team of ethics nursing faculty of Sultan Agung Islamic University.

3 RESULTS

Table 1. shows that most of the fetus in the respondents before to the Spiritual Endorphine Stimulative (SES) intervention experienced an not prosperous condition of 13 (68.4%).

Table 2. shows that most of the fetus in the respondents after the Spiritual Endorphine Stimulative (SES) intervention experienced a prosperous condition of 15 respondents (78.9%).

Normality test using Shapiro-wilk shows the result p value 0,00 which means the distribution of data is not normal.

Table 4. shows that by using the wilcoxon test the value of p value is 0.003 or less than 0.05 which means that there is a significant influence between Spiritual Endorphine Stimulation (SES) on fetal well-being in pregnant women who experience premature rupture of membranes at the Sultan Agung Islamic Hospital at Semarang.

Table 1: Results of fetal well being frequency distribution before Spiritual Endorphine Stimulatory (SES) intervention in early membrane rupture of mothers at Sultan Agung Islamic Hospital 2016 (n = 19).

Variable Well being	Test Result	
	Frequency	Percent (%)
Not Prosperous	13	68.4
Prosperous	6	31.6

Table 2: Results of fetal well being frequency distribution after Spiritual Endorphine Stimulatory (SES) intervention in premature rupture of membranes of mothers at Sultan Agung Islamic Hospital 2016 (n = 19).

Variable Well being	Test Result	
	Frequency	Percent (%)
Not Prosperous	4	21.1
Prosperous	15	78.9

Table 3: Result of fetal well being normality test at early membrane rupture of mother at Sultan Agung Islamic Hospital of 2016 (n = 19).

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Fetal well-being before Intv	.430	19	.000	.591	19	.000
Fetal well-being before Intv	.482	19	.000	.507	19	.000

Table 4: Influence of Spiritual Endorphine Stimulation (SES) on fetal well-being in pregnant women who experience early membrane rupture at Sultan Agung Islamic Hospital 2016 (n = 19).

		N	Mean Rank	Sum of Ranks
Fetal well-being before Intv - Fetal well-being after Intv	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	9 ^b	5.00	45.00
	Ties	10 ^c		
	Total	19		
Test Statistics ^b				
	Fetal well-being before Intv - Fetal well-being before Intv			
Z			-3.000 ^a	
Asymp. Sig. (2-tailed)			.003	

4 DISCUSSION

The results showed that there was a significant influence between Spiritual Endorphine Stimulation (SES) on the well being of the fetus in pregnant women who experience early membrane rupture at Sultan Agung Islamic Hospital Semarang. Spiritual Endorphine Stimulation (SES) is a stimulation in the form of recitation of the holy Qur'an, given by auditoric stimulation. According Cantekin, 2013 mentioned that auditor stimulation is able to stimulate the release of edorphine in the body so as to reduce stress and individuals become more comfortable. Research conducted by Adriano et.al in 2013 also mentioned that with the giving of music therapy can make the heart rate becomes more organized and the blood circulation becomes more smoothly. Similar research was also conducted by Carolyn J. Murrock & Patricia in the year 2013 which states that the provision of music therapy can increase physical activity and health.

The Spiritual Endorphine Stimulation (SES) which is part of the auditoric therapy works in a way, the sound of the recitation of the Qur'an / murotal is received by hearing, transmitted to the brain and affecting the limbic system (Eka, Erwin 2009). Auditoric stimulation in which the murotal readings are received by the brain in the Midbrain section, further stimulates the midbrain to secrete Gama

Amino Butyric Acid (GABA), enkepalin and beta endorphin, which act as electrical conductive inhibitors, have analgesic effects and serve as relaxants (Guyton & Hall, 2008). Correlations can be seen significantly in the respondents who conducted the study by providing SES intervention. The results obtained the condition of the fetus in early membrane rupture patients showed significant improvement in well being.

5 CONCLUSIOS

The result shows that the auditoric stimulation was accepted by the brain in the Midbrain section, then it stimulated the Midbrain to release Gama Amino Butyric Acid, enkepalin and beta endorphin which function as electrical conductivity inhibitors, have analgesic effect and act as relaxation making the heart rate more regular and the blood circulation run more smoothly. In conclusion there is a significant effect of Spiritual Endorphin Stimulation on the fetus well being to the mother with the early membrane rupture.

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