The Effect of Open Corner Care Towards Reducing The Risk of Infection in Newborn Babies at Grandmed Lubuk Pakam Hospital In 2020

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ARTICLE INFO

A B S T R A C T

The purpose of this study was to determine the reduction in the risk of infection before and after open umbilical cord care for newborns at GrandmedLubukPakam Hospital in 2020. This research method was quantitative with a pre-experimental research design in the form of an experimental design, namely one group pretest- posttest design, this research was conducted at GrandmedLubukPakam Hospital. The results of this study are: most of the respondents before the open umbilical cord care was performed and after the open umbilical cord treatment was carried out in respondents with the risk of infection being no infection as many as 21 respondents or 70% and infection as many as 9 . By using the Wilcoxom test, the result is p value = 0.000 with a value of = 0.05. Because the value of p = 0.000 <0.05, Ha is accepted, that is, there is an effect of open umbilical cord care on reducing the risk of infection in newborns at GrandmedLubukPakam Hospital.

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A B S T R A K

Tujuan penelitian ini yaitu untuk mengetahui penurunan resiko infeksi sebelum dan sesudah dilakukan perawatan tali pusat terbuka pada bayi baru lahir di Rumah Sakit Grandmed Lubuk Pakam tahun 2020. Metode Penelitian ini yaitu: kuantitatif dengan desain penelitian pre eksperiment dengan bentuk desain eksperiment yaitu one group pretest-posstetest design, Penelitian ini di lakukan di Rumah Sakit Grandmed Lubuk Pakam. Hasil dari Penelitian ini yaitu: sebagian besar responden sebelum dilakukan Perawatan Tali Pusat Terbuka dan sesudah dilakukan Perawatan Tali Pusat Terbuka pada responden dengan Resiko infeksi menjadi Tidak infeksi sebanyak 21 responden atau 70% dan Infeksi sebanyak 9. Dengan menggunakan Uji Wilcoxom dapatkan hasil nilai p = 0,000 dengan nilai α = 0,05. Karena nilai p = 0,000 < 0,05 maka Ha diterima yaitu ada Pengaruh Perawatan Tali Pusat Terbuka Terhadap Penurunan Resiko Infeksi Pada Bayi Baru Lahir Di Rs Grandmed Lubuk Pakam.

INTRODUCTION

One of the programs of the Indonesian Ministry of Health is childbirth facilitated by health services. In Indonesia in 2019, the target for deliveries in health facilities is 85%. Delivery in health facilities is to prevent infection in newborns through cutting the umbilical cord with non-sterile tools and incorrect umbilical cord care (Ministry of Health, 2017: 11).

According to the World Health Organization (WHO) in 2010 found an infant mortality rate of 560,000 caused by umbilical cord infection (Aisyah, 2017: 19). In Indonesia, the incidence of newborn infections ranges from 24% to 34%, and the infant mortality rate caused by infection has decreased from 2014 to 2016, namely in 2014 by 1.83%, in 2015 by 1.82% and in 2016 by 1 ,52% (Dinkes, Lampung Province, 2017: 39).

In Lampung, the incidence of neonatal tetanus from 2014 to 2016 decreased, namely in 2014 the case of tetanus neonatorum was 0.7 per 1000 live births, namely 7 cases and the infant mortality rate caused by tetanus neonatorum was 1.83% and others (Lampung Provincial Health Office, 2015). : 45). In 2015 it fell to 0.4 per 1000 live births, namely 4 cases and the infant mortality rate was caused by 0.17% neonatal tetanus and others (Lampung Provincial Health Office, 2016: 63). In 2016 it fell to 0.3 per 1000 live births, namely 3 cases and the infant mortality rate was 0.19% due to neonatal tetanus and others (Lampung Provincial Health Office, 2017: 39).

In developing countries, infection of the umbilical cord is usually caused by poor cord care, less sterile delivery procedures, and insufficient tectanus toxoid in pregnant women. The highest cause of neonatal death in the 8-28 day age group was infection with 58.1% (including tetanus, sepsis, diarrhea). Feeding problems (15, 4%). Infection has the largest proportion of causes of infant mortality in Indonesia (Kemenkes RI 2018).

In Indonesia, the incidence of neonatal tetanus from 2016 to 2018 fluctuated, namely in 2016 there were 14 cases with infant mortality due to neonatal tetanus 0.6 per 1000 live births (Ministry of Health, 2017). In 2017 it increased to 25 cases with infant mortality due to tetanus neonatorum 1.4 per 1000 live births (Ministry of Health, 2018). In 2018 it fell to 10 cases with a neonatal mortality rate of 0.4 per 1000 live births (Ministry of Health, 2019).

The causes of infant mortality are infection, asphyxia, birth trauma, prematurity, congenital abnormalities and others (Wahyuningsih and Wahyuni, 2017). Infection can occur due to the entry of germs through the umbilical cord. Clostridium tetani is most of the germs that enter through the umbilical cord that causes tetanus neonatorum. One of the causes of death in neonates is due to an infectious disease, namely tetanus neonatorum. This infection is caused due to improper cutting of the umbilical cord at birth and improper care of the umbilical cord. Tetanus neonatorum and umbilical cord infection have been the cause of death in many countries. Every year 500,000 babies are due to neonatal tetanus and 460,000 die from umbilical cord infections.

Care for newborns that is often taught by health workers to mothers before going home, one of which is umbilical cord care. In the first weeks that must be done is to clean the umbilical cord from the base to the end. Care for newborns requires care, attention and accuracy. This is intended to reduce pain or a worse condition due to nursing interventions (Huliana, 2015).

Various kinds of actions are taken to prevent infection in the umbilical cord starting from cutting the umbilical cord and tying the umbilical cord using aseptic techniques and sterile tools. Poor umbilical cord care, improper hand washing can also lead to infection of the umbilical cord (Davies & McDonald, 2012). One of the measures to prevent infection in the umbilical cord is to perform umbilical cord care, there are two types of umbilical cord care, namely modern and traditional. Modern and traditional treatments. Modern umbilical cord care uses antiseptic ingredients such as 70% alcohol or antimicrobials such as Povidone-Iodine 10% (betadine), Chlorhexidine and others. While traditionally using honey, ghee oil (india) or breast milk (Aisyah, Islami, & Mustagfiroh, 2017).

Open umbilical cord care is care for newborns, namely by not wrapping the umbilical cord or baby's stomach and not applying any material to the umbilical cord, various studies have shown that by allowing the umbilical cord to dry, not closed, only cleaned using clean water is the best way. effective and inexpensive for umbilical cord care (Aisyah, Islami, & Mustagfiroh 2017).

The results of the study according to Yuspita (2017), that the negative impact of umbilical cord care if the umbilical cord is not cared for properly, germs will be able to enter, resulting in an infection that causes tetanus neonatorum. Signs of infection in the newborn's umbilical cord are marked with pus, smelly, red, hot, swollen umbilical cord and there is a tender area around the base of the umbilical cord the size of a hundred rupiah coin. During the umbilical cord care, the newborn's umbilical cord decays for 5-7 days and treatment is carried out 1 day 2 times to prevent infection while the newborn is hospitalized.

Based on the initial survey, it was obtained from the Medical Records of Grandmed Lubuk Pakam Hospital. Newborn patients in the last 3 months, in 2020 from November to January 2020 there were 60 patients. Of the 10 patients who underwent open umbilical cord treatment, 6 patients did not have infection and 4 patients had infections such as red, swollen, smelly umbilical cord. Open umbilical cord care is rarely performed in some hospitals in performing umbilical cord care for newborns and in some hospitals, officers perform umbilical cord care for newborns using a closed technique using dry gauze. Based on these observations, researchers are interested in taking the title "The Effect of Open Umbilical Cord Care on Reducing the Risk of Infection in Newborns at GrandMed Lubuk Pakam Hospital"

METHODS

This study uses quantitative research with a pre-experimental research design in the form of an experimental design, namely one group pretest-posttest design. This design is done by means of pretest or observation first. Prior to the intervention to determine the risk of infection of the newborn. Then a posttest or final observation was carried out by means of open umbilical cord care to find out if there was a decrease in the risk of infection after the intervention. The sampling technique used is purposive sampling, which is a non-random sampling technique with special criteria in accordance with the research objectives so that it is expected to be able to answer research problems. The data collection method used observation sheets. Decreased risk of infection before and after open umbilical cord care in newborns.The location of this research was carried out at Grandmed Lubuk Pakam Hospital in 2020. This research was conducted in April 2020 – June 2020.

The population in this study were subjects who met the predetermined criteria (Nursalam, 2020). The population in this study were all newborn patients at Grandmed Lubuk Pakam Hospital.

The sample in this study was 30 newborns at Grandmed Lubuk Pakam Hospital in 2020. This study used purposive addition, while the characteristics of the population in this study were categorized in inclusion and exclusion criteria.

The types of data collection carried out by researchers are:

1. Primary Data, namely data obtained directly from research subjects through observations which contain "the effect of open umbilical cord care on reducing the risk of infection in newborns".
2. Secondary Data, namely data taken at Grandmed Lubuk Pakam Hospital in 2020

The research instrument used was an observation sheet. Observation is one of the data collection techniques to obtain a description of an event or events (Supardi & Rustika, 2013).

The instruments used in this research are:

1. The independent variable (independent) is open umbilical cord care using an open umbilical cord care SOP sheet
2. The dependent variable (bound) is infection in newborns using the Observation sheet. Use the ordinal scale. The results of the observations are presented in tabular form and then grouped into 0 = no infection, 1 = there is infection. After the results are classified, perform data processing and data analysis to determine the effect of open umbilical cord care on reducing the risk of infection in newborns at Grandmed Lubuk Pakam Hospital in 2020.

According to Notoadmodjo (2018), data processing is an important step. Because the data obtained directly from the research.

Data processing is carried out through four stages, namely:

a. Editing

Editing is the accuracy of checking the questionnaire observation sheet whether the answers in the observation sheet and questionnaire are complete, clear, relevant and consistent.

b. coding

Coding is the activity of converting letters into data in the form of numbers/numbers. This coding activity is to facilitate the market during data analysis.

c. Processing

Processing is done by entering data from observations, questionnaires to a computerized program. This stage is carried out after coding the data.

d. Cleaning

Cleaning is checking again the data that has been entered to find out whether there are errors or not.

1. Univariate Analysis

Univariate analysis is an analysis that is carried out for each variable from the results of research in general has the aim of explaining or describing each of the variables studied in a simple manner which is presented in the form of a frequency distribution table. In the univariate analysis, the independent variable (open umbilical cord care) and the dependent variable (reduced risk of infection) will be tested.

2. Bivariate Analysis

Bivariate analysis is to see the relationship or difference in distribution data or proportion data between the independent variable and the dependent variable. This analysis was carried out using the T-Test test to determine the effect of open umbilical cord care on reducing the risk of infection in newborns. However, if the results of the normality test are not normally distributed, the test will be replaced using the Wilcoxon test.

RESULTS AND DISCUSSION

Univariate

1. Reducing the risk of infection in newborns before open umbilical cord treatment at Grandmed Lubuk Pakam Hospital.

Table 1.
Distribution of Decreased Risk of Infection in Newborns Before Open Umbilical Cord Treatment at Grandmed Lubuk Pakam Hospital.

	Criteria	F	%
Pre-Test	risk of infection	30	100,0
	Total	30	100,0

Based on table 1 shows that of the 30 respondents, all of them have signs of risk of infection according to the inclusion criteria (100%).

2. Reducing the risk of infection in newborns after open umbilical cord treatment at Grandmed Lubuk Pakam Hospital.

Table 2.
Distribution of the reduction in risk of infection in newborns after open umbilical cord treatment at Grandmed Lubuk Pakam Hospital.

	Criteria	F	%
Post Test	No Infection	21	70,0
	Infection	9	30,0
	Total	**29**	**100,0**

Based on table 2 shows that of the 30 respondents, the majority of respondents with no infection were 21 people (70%) and 9 people with infection (30%).

The Effect of Open Umbilical Cord Treatment on Reducing the Risk of Infection in Newborns at Grandmed Hospital Lubuk Pakam

Table 3.
Effect of Open Umbilical Cord Treatment on Reducing the Risk of Infection in Newborns at Grandmed Lubuk Pakam Hospital. n (30)

Pre-Test	Post-Test		Total	
	No Infectious	Infection		
	F	F	N	%
Infection Risk	21	9	30	100%
Uji Wilcoxom	P = 0,000 < 0,05			

Based on table 3 above, it can be seen from 30 people mostly before open umbilical cord care was performed and after open umbilical cord care was carried out in respondents with the risk of infection being no infection as many as 21 respondents or 70% and infection as many as 9. By using the Wilcoxom test, the result is p value = 0.000 with a value of = 0.05. Because the value of p = 0.000 <0.05, Ha is accepted, that is, there is an effect of open umbilical cord care on reducing the risk of infection in newborns at Grandmed Lubuk Pakam Hospital.

DISCUSSION

The Effect of Open Umbilical Cord Treatment on Reducing the Risk of Infection in Newborns at GrandMed Hospital Lubuk Pakam

Newborns (BBL) are babies born during the first hour of the baby's birth until the age of 4 weeks. Normal newborns have a birth weight between 2500 – 4000 grams, are full term and are born crying immediately (Donna L. Wong, 2015).

Umbilical cord infection or omphalitis is an infection that occurs in the umbilical cord during the umbilical cord detachment process with symptoms of a red, swollen, pus discharge or foul-smelling umbilicus (WHO, 2008).

Umbilical cord care is an act of caring for the umbilical cord in newborns to keep it dry and prevent infection. It is very important for mothers to know about umbilical cord care, especially (post partum) so that mothers can provide maximum care for babies so that babies can grow well and are not infected through the umbilical cord. Incorrect umbilical cord care in infants will experience infectious diseases that will result in death (Sodikin, 2015).

Treatment of the umbilical cord for newborns is by not wrapping the umbilical cord or the baby's stomach and not applying any material to the umbilical cord, various studies have shown that leaving the umbilical cord dry, not closed, only cleaned with clean water is an effective and inexpensive way for umbilical cord care (Aisyah et al, (2017).

Research conducted by Istiqomah (2013), with the results of this study, the difference in the comparison of umbilical cord care between those treated with the open method and betadine obtained a time difference of 3 days with a p value = 0.000 (p <0.05).

The mean value of betadine treatment was longer than the open method. It can be seen from this study that the determination of the form of intervention and implementation will affect the difference in the time of umbilical cord release, and in this study the best is the umbilical cord treatment with an open method system using 70% alcohol.

CONCLUSION

From the results of this study, most of the respondents before the open umbilical cord treatment was performed and after the open umbilical cord treatment was carried out in respondents with the risk of infection becoming non-infectious as many as 21 respondents or 70% and infection as many as 9. By using the Wilcoxom test, the result is p value = 0.000 with a value of = 0.05. Because the value of p = 0.000 <0.05, Ha is accepted, that is, there is an effect of open umbilical cord care on reducing the risk of infection in newborns at Grandmed Lubuk Pakam Hospital.

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