

The Effectiveness of Breast Milk (ASI) in the Release of the Umbilical Cord in Newborns

By Indah Rohmawati

The Effectiveness of Breast Milk (ASI) in the Release of the Umbilical Cord in Newborns

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ABSTRACT

The umbilical cord is a channel that must be cut and tied or clamped after the baby is born, because it is no longer needed. The remainder of this umbilical cord should be properly treated to prevent longer umbilical cord release, the risk of infection and even tetanus neonatorum (TN) resulting in death in neonates. Breast Milk (ASI) is the best and most complete source of nutrition for babies, because it contains IgA antibodies, anti-infective agents, and anti-inflammatory. This study aims to determine the effectiveness of breast milk (ASI) in the release of the umbilical cord in newborns. This research is an experimental analytic research with random control trial design (RCT). The population in this study were all newborns born in BPM Winarti and BPM Henik Tulungagung District on March 1 to May 18, 2017, using incidental sampling obtained 30 respondents, divided into 15 respondents treatment group and 15 respondents group control. The measuring instrument uses observation sheet to determine the release time of the umbilical cord. Data analysis techniques, the characteristics of continuous data sample data are described in n, mean, SD, minimum and maximum. To determine 2 unpaired samples having different mean values tested statistically with independent t test. The results showed that there was a mean difference between the two groups that was statistically significant with a p value of 0,000 which means that umbilical cord care is more effective if using breast milk because the umbilical cord release is faster. It is necessary to socialize cord care program by using breast milk.

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I. INTRODUCTION

The umbilical cord is the channel of life for the fetus during in the womb. By the time the baby is born, this channel is no longer needed and must be cut and tied or clamped. The remainder of this umbilical cord should be treated. Treatment of the umbilical cord is a way of caring or maintaining umbilical cord a baby that has been cut and tied or clamped after the baby is born. Treatment of the umbilical cord is actually very simple, the most important is to ensure that the area around the umbilical cord is always clean and dry. The goal of treating the umbilical cord is to prevent infection, speed up the drying process, and accelerate the release of the umbilical cord. Although umbilical cord care is very simple, but if not properly treated it can cause time of longer umbilical cord release, the risk of infection and even tetanus neonatorum (TN) that can cause death in the neonate (Putra, 2012).

The health profile in Indonesia mentions the incidence of tetanus neonatorum (TN) in 2014, there are 84 cases from 15 provinces with 54 deaths, an increased compared to 2013 is which only 53.8%. In 2015 there was a decrease of 53 cases from 13 Provinces with 27 deaths. Based on data obtained from the Health Profile of East Java Province, in 2013 there were 31 cases of TN cases with a mortality rate of 16 cases. In 2014 there was an increase of 36 cases of TN cases with a mortality rate of 15 cases. Based on the recording and reporting of puskesmas collected by Tulungagung District Health Office, from 2014 until 2016 no reports of incident about tetanus neonatorum in Tulungagung District were. Results of research conducted in hospitals in developing countries found

47% of babies carried sepsis and the main cause is umbilical cord infection and 21% of babies experience omphalitis. In developing countries, cord infection is usually caused by poor cord care, action less sterile labor, and the coverage of tetanus toxoid in pregnant women is still lacking (Sumaryani, 2006).

The technique of umbilical cord care is still varied both in the use of materials and methods. Treatment methods used both traditionally using honey, ghee (India), and colostrum or breast milk, as well as modern methods ingredients using antiseptic ingredients such as sterile gauze, 70% alcohol or antimicrobial, povidone-iodine 10% (Betadin), chlorhexidine, iodine tinsor (Sodikin, 2009). Breast Milk is the best and most complete source of nutrition for infants, because it contains IgA antibodies, anti-infective agents, and anti-inflammatory (Farahani, 2008). The content of this substance that makes breast milk can be used as an alternative method for cord care and can accelerate the release of the umbilical cord (Smith, et al., 2007). The purpose of this study to determine the effectiveness of breast milk (ASI) in the release of the umbilical cord in newborns. This research are using selecting template. This template has been tailored for output on the A4 paper size. Maintaining the integrity of the spesifications. The head margin in this template measures proportionately more than is customary.

II. METHOD

Research design, this research is experimental analytic research with random control trial design (RCT). The population in this study were all newborns born in BPM Winarti and BPM Henik Tulungagung District on March 1 to May 18, 2017, using incidental sampling obtained 30 respondents, divided into 15 respondents treatment group and 15 respondents group control. The measuring instrument uses an observation sheet to determine the release time of the umbilical cord.

Data analysis techniques, the characteristics of continuous data sample data are described in n, mean, SD, minimum and maximum. Characteristics of categorical data sample data is defined in n and percentage (%). To determine 2 unpaired samples having different mean values tested statistically with independent t test.

III. RESULTS AND DISCUSSION

Description of respondent characteristics using univariate analysis. Univariate analysis aims to determine the number and percentage of the characteristics of respondents.

Table 1. Characteristic of research subjects

How to care for the umbilical cord	Amount (n)	Persentase (%)
Breast milk	15	50
Sterile gauze	15	50

Based on Table 1 it is known that 50% of the umbilical cord respondents were treated with sterile gauze and 50% of the respondents were treated using breast milk.

Description of continuous data research data presented in the form of minimum analysis, maximum, mean and standard deviation. The Presentation of the continuous data variabel research aims to determine the average of release time of umbilical cord compared to the value of the maximum, as follows.

Table 2. description of research variables

the umbilical Cord release time	n	minimum	maksimum	Mean	SD
Breast milk	15	4	7	5,33	0,82
Sterile gauze	15	5	11	7,2	1,57

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Based on table 1, it is found that the average time of umbilical cord release is 5,33 days for cared umbilical cord using breast milk, and 7, 2 days for cared umbilical cord using sterile gauze. seen from the minimum or fastest time in the release of umbilical cord, umbilical cord care with the use of breast milk more quickly when compared with care using sterile gauze that is on day 4.

In order to prove the effectiveness of breast milk in this umbilical cord care is significant or not, analyzed by independent sample t test.

Table 3. The Effectivity Of Breast Milk In Umbilical Cord Care

	group	n	mean	SD	t	p
the umbilical Cord release time	Breast milk	15	5,33	0,816	-4,090	0,000
	Sterile gauze	15	7,20	1,658		

Based on table 3 it was found that the mean between the two groups differed significantly, because it faster in the group which use breast milk. Seen from a p value of 0,000 means umbilical cord care by using breast milk is more effective because the umbilical cord release is faster.

Breast milk is one type of food that is adequate for all elements of the baby's needs both physical, psychological social and spiritual. Breast milk contains nutrients, hormones, growth immunity, anti allergies, and anti-inflammatory (Hubertin, 2003).

Breastfeeding mothers can use their breast milk besides to meet the baby's nutritional needs, can also be used for care the umbilical cord. Based on the results of research in table 1 getted the data that 50% of the respondents the umbilical cord care use breast milk in a way applying to the base of umbilical cord.

Respondents in the treatment group, the umbilical cord was treated with Breast milk since the baby is birth or from day one. Breast milk on the first day until the third day is called colostrum. Breast milk especially colostrum has long been shown to contain bioactive factors such as immunoglobulins, enzymes, cytokines, and cells that have effective functions as anti-infective and anti-inflammatory. Breast milk contains SIGA (secretory IgA) which is an antibody substance contained in breast milk, which serves to protect the surface of organs exposed to breast milk, from attachment of bacteria and viruses (Laksawati, 2009). The washed umbilical cord, dried and bolted with colostrum for 3 consecutive days causes the umbilical cord protected from infection due to either bacteria or viruses.

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Based on the data in Table 2 it is mentioned that the umbilical cord care by using breast milk, the umbilical cord can release off on day 4, 1 faster when compared with just the umbilical cord care by using sterile gauze.

The umbilical cord care with breast milk, causing the umbilical cord surface or the rest of the umbilical cord protected from the infection, it all can causing the cord to dry faster and released. Based on the data in table 3 it is found the mean difference of umbilical cord treatment using breast milk compared with using sterile gauze, the mean differed significantly because the umbilical cord was faster release when cared using breast milk with mean value 5.33 days compared to only cared using sterile gauze with mean value 7, 20 days. Based on the value of p obtained 0.000 means breast milk is more effective for caring the umbilical cord. This is because umbilical cord cared with breast milk can be protected from infection so that it dries quickly and released.

The umbilical cord release can faster 2 days when compared to simply cared it using sterile gauze. With a variety of useful substances, colostrum becomes an alternative material for cord care in addition to its cheap, sterile cost, the technique is easy to do by the mother and provide psychological satisfaction for the mother in caring for the baby (Supriyanik, 2012).

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IV. CONCLUSION

Umbilical cord care is more effective if using breast milk because the umbilical cord release is faster.

V. ACKNOWLEDGMENT

Thanks to BPM Winarti and BPM Henik Tulungagung District. According to this research, it is advisable to: It is necessary to socialize umbilical cord care program by using breast milk.

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