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The Influence of Corner Care Using Topical Breast Milk and Dry Gauge Methods on The Time of Crap Delivery

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ABSTRACT

The best umbilical cord care after birth is a controversial issue. Neonatal tetanus cases in Indonesia increased from 10 cases in 2018 to 17 cases in 2019, While in Banten Province in 2019, there were 12 cases of neonatal tetanus with 8 deaths, including in Cilegon City. According to research, one of the preventions of neonatal tetanus is umbilical cord care. This study aimed to analyze the effect of umbilical cord care by using the breast milk topical method and dry gauze when removing the umbilical cord. This research is a quantitative study with a quasi-experiment research design with a control design post only, the sample is 30 respondents with a purposive sampling technique, and the research instrument is in the form of an observation sheet. The data were analyzed with an independent T-test. The results of a bivariate analysis can be concluded that there is a significant effect between differences in the acceleration of umbilical cord release. In this study, there was a significant difference between umbilical cord care using the topical method of breast milk and dry gauze on the timing of umbilical cord detachment. This can be input and evaluation for PMB in Cilegon City, regarding the importance of effective newborn umbilical cord care and does not cause infection.

Keywords: dry gauze; timing of umbilical cord removal; topical method of breastmilk; umbilical cord care

INTRODUCTION

Based on the results of Basic Health Research (Riskesdas) in (2019), in Indonesia the Number of cases of tetanus neonatorum increased in the year 2019, amounting to 17 cases, where previously there were 10 cases in the year 2018 (Dasar, 2019). However, in 2019 the number of cases that died due to Tetanus Neonatorum decreased to 2 cases died, with a Case Fatality Rate (CFR), of 11,76%. Of the 7 provinces where there are cases of tetanus neonatorum, 2 provinces, there are cases died of Jambi and South Sumatra. The number of cases of tetanus neonatorum is majority located in the Province of South Sumatra and West Kalimantan, namely as many as 5 cases, with a Case Fatality Rate (CFR) of 20%.

The profile Health of the Province Banten (2020), the number of deaths of newborns in the province of Banten in the year 2019 amounted to 1.154 per 1000 live births, up more than the information year 2018, amounted to 822 per 1000 live births. The findings and the death of the problems of tetanus neonatorum in the province of Banten in 2019, there are 12 cases of tetanus neonatorum with the death of as many as 8 people. Districts/cities that reported the problem of tetanus neonatorum are the Lebak District, Cilegon, Pandeglang, Serang, and Tangerang Regency (Banten, 2020).

One of the preventions of infection of the umbilical cord and neonatal tetanus is the care of the umbilical cord. Umbilical cord care is a treatment method designed to overcome the newborn's umbilical cord to cope with the infection, from the mother to understand that the umbilical cord is very important (Yuspita, 2017). Tetanus neonatorum occurs frequently in neonates and causes high mortality. The disease is caused by the Clostridium tetani spores, which pass through the umbilical cord selection. This can happen because of actions that are not to the needs, for example, the selection of the umbilical cord with bamboo or scissors that is not sterile, or after the umbilical cord is cut spiked with ash, dirt, grease, leaves, and partially with the use of the services that are frequently used. In addition, the expected research is directed at the substance antiseptic and dryer astringent example of breast milk or colostrum traditional

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(Abata, 2015). Breast Milk (ASI) holds many antibodies of the IgA, so it has a preventive effect on umbilical cord infection (Allam, 2015).

The umbilical cord care center uses topical as I colostrum to identify the time off the umbilical cord and understand the infection in the neonatal period. Breast milk is the best source of nutrients and products for the neonate. In breast MILK support technology Ribs, aging anti-infection which can benefit patients on babies (Romlah, Misdeti, & Anggraini, 2018). In the milk stand SigA (secretory IgA), which is the substance of antibodies that are found only in breast milk, which serves to support the formation of organs of the body associated with the prevention of bacteria and viruses (Lyngdoh, Kaur, Kumar, Gautman, & Ghai, 2018). Breast milk is readily available and easily used as a noninvasive method for umbilical cord care. The application of breast milk takes a shorter time to learn the umbilical cord than antiseptic solutions. milk has been used as a home remedy for minor ailments, such as conjunctivitis, bites, and stings, contact dermatitis, wounds, burns, and abrasions that become infected (Elsobky, Emam, Elmenim, & Shahin, 2017)

Human milk may accelerate the complicated process of cord separation through polymorphonuclear leukocytes present in the cord, proteolysis enzymes, and other available immunologic compounds. Breast milk has many immunologic and anti-infective agents, and colostrum contains significant quantities of complement components that act as natural antimicrobial agents and is also equipped with protective factors that provide specific and non-specific passive immunity (Vural & Kisa, 2006). This study aimed to analyze the effect of umbilical cord care using the breast milk topical method and dry gauze when removing the umbilical cord.

METHOD

This research is quantitative research with design research being a quasi-experimental design with control design post only; the determination of the number of samples in this research is based on the concept and application of the sample for the research experiment that simple. The sample used in this study is a newborn in the PMB city of Cilegon. The samples were 30 respondents divided into 2 with a ratio of 1:1 with the number of samples 15:15. A sample of 30 respondents, with a total sample of 15:15 with a purposive sampling technique, research Instruments in the form of an observation sheet. Primary and secondary data were analyzed using the Test analysis is independent T-test.

RESULT

Table 1. Frequency Distribution of Average Time of The Release of The Umbilical Cord in Topical Breastmilk Group

Release time	Frequency (f)	Percent (%)
Fast (3-4 Days)	2	13.3
Normal (5-7 Days)	13	86.7
Total	15	100.0

Based on Table 1 shows that on a string, a group on topical breastmilk has the highest frequency, with the normal time of release being 13 respondents or 86,7% and fast release being 2 respondents or 13.3%.

Table 2. Frequency Distribution of Average Time of The Release of The Umbilical Cord in Dry Gauze Group

Release time	Frequency (f)	Percent (%)
Fast (3-4 Days)	3	20.0
Normal (5-7 Days)	12	80.0
Total	15	100.0

Based on Table 2, the frequency distribution of the average time of the release of the umbilical cord in the group of dry gauze aware that has the highest frequency with the normal time of release is 12 respondents (80.0%), and fast release is 3 respondents (20.0%).

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Table 3. Normality Data Test

The variable	Skewness	Standard Error	Result of the Division	Conclusion
Release of the umbilical Cord with a Topical breast Milk	-0.149	0.564	-0.26	Normal
Release of the umbilical cord with the dry gauze	-0.745	0.597	-1.24	Normal
Total		15	100.0	

Based on table 3 shows the results of the normality test of the data, where it is known throughout the variable data to produce the value of the skewness divided by the standard error is < 2 or < -2 so that it can be explained that all the variables are normally distributed.

Table 4. The Influence of Topical Breast Milk With Dry Gauze Against The Release of The Umbilical Cord

Variable	N	Mean	SD	SE	p-value
Release of the umbilical cord with a topical breastmilk	15	5.69	1.014	0.254	0.000
Release of the umbilical cord with the dry gauze	15	9.21	1.847	0.494	

Based on Table 4 shows that the average- the average time of the release strap center on a group of topical breast MILK with a mean of 5.69 days and care dry gauze is 9.21 days. The difference in the old release strap center between Topical breast milk and dry gauze treatment is 4 days, with a standard deviation on topical breast milk of 1.014 and a standard error of the mean of 0.254. While the standard deviation on the gauze dry was 1.847 and the standard error of the mean was 0.494, the p-value obtained 0.000. This is small compared with α=0.05, so it can be concluded that there is no difference in the acceleration of the time of the umbilical cord release using topical breast milk with dry gauze.

DISCUSSION

Based on the results of the study showed that the timing of the release of the umbilical cord that was given topical breast milk 5 days faster than by using the method of Gauze to dry for 9 days. Because there is good nutritional content in breast milk, topical breast milk contains a very high protein that serves as forming the bonding life of the body, regulates the balance of body fluids to react to the acid alkaline to a pH-balanced body, forming antibodies and plays an important role in transporting nutrients into the tissue. The proteins in colostrum and breast milk will bind to the protein in the umbilical cord, thus forming a reaction of the immune and a process of apoptosis. Division and growth of cells under genetic control cells also can undergo programmed cell death. Genes in the cell play an active role in the destruction of the cell (Ediningtyas, 2014).

The results of this research prove that the average time of the release of the umbilical cord in the group of topical breast milk is 5 days, in contrast to the dry gauze group, i.e., dry 9 days, so there is a time comparison between the two-intervention umbilical cord care (Rostarina, Hadi, & Ani, 2021). The subject is in line with the research by Sari (2016), about a comparison of topical application of breastmilk with the care of dry gauze to the old release of the umbilical cord toddler, the release of which is given the care of breastmilk is a 4 day, 3 hours, otherwise the treatment dry gauze is 6 days 4 hours. The results assure that the umbilical cord with wear topical breast milk is more flash than treatment dry gauze (Sari, Nurdiati, & Astuti, 2016).

The results of the research by Supriyanik (2012), it was found that with the care of the umbilical cord, wear breast milk, as the material antiseptic topical want to speed up the process of release of the rope, the average on day 4 compared to that only with Kassa dry intertwined on day 6 with a difference of almost 2-day share may free toddler of tetanus neonatorum is great (Supriyanik & Handayani, 2012).

This is in line with research by Subiastutik (2012) about the effectiveness of the topical administration of breast milk compared to the care of dry reported that topical breast Milk was about substances antibodies, anti-inflammatory, as well as leukocyte function in squeezing the formation of the colonization of pathogenic microorganisms that can cause inflammation, as well as speed up the time off the umbilical cord. The results of this research show the results of the average time of the release of the umbilical cord to wear topical breast milk is 5.69 days, and wearing the dry gauze is 7.06 days, with a value of ρ=0.000 < α=0.05, so there is a comparison of a significant correlation between umbilical cord

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care with topical breast milk as well as dry gauze to the old release of the umbilical cord, the time of umbilical cord care with topical breast milk is flash 1,37 day compared dry gauze (Subiastutik, 2012).

It is also in line with the research of Lyngdoh et al. (2018), in that breast milk contained SigA (secretory IgA), which is the substance of antibodies that are found only in breast milk, which serves to protect the surface of the organs of the body that are exposed by preventing the attachment of bacteria and viruses. Care of the umbilical cord by wearing sterile gauze is quite efficient for researchers. Still, for researchers, care of the umbilical cord by wearing sterile gauze quite efficient but wearing gauze clean does not have certain substances that could not help the process of the loss of the umbilical cord is the process of detachment of the umbilical cord (Lyngdoh, Kaur, Kumar, Gautman, & Ghai, 2018).

Moreover, Zupan et al. concluded that caring for the umbilical cord with antiseptics can lead to delayed cord separation and natural dry care is as effective and safe as the application of antibiotics and antiseptics (Zupan, Garner, & Omari, 2004). Human milk may accelerate the complicated process of cord separation through polymorphonuclear leukocytes present in the cord, proteolysis enzymes, and other available immunologic compounds. Breast milk has a lot of immunologic and anti-infective agents, and colostrum contains significant quantities of complement components that act as natural antimicrobial agents and are also equipped with protective factors that provide specific and non-specific passive immunity. In other words, mother milk can be effective as chlorhexidine (broad-spectrum antibiotics) in reducing signs of cord infection.

CONCLUSION

Based on the results of the analysis showed that the average time of the release of the umbilical cord in the group of topical breast milk with a mean of 5.69 days and use of dry gauze is 9.21 days. The difference in the old release of the umbilical cord between the topical treatments of breast milk and the gauze was dry 4 days with a p-value of 0.000 can be concluded that there is a significant difference between umbilical cord care using the method of topical breast milk and dry gauze to the time of the release of the umbilical cord. For mothers, it can be used as input and provide insight in independently caring for the baby's umbilical cord and choosing good umbilical care for their babies. The cultural practice of topical breast milk to the umbilical cord appears to have no adverse effects. It is associated with shorter cord separation times than are with the use of dry gauze.

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