p-ISSN: 2089-6778
e-ISSN: 2549-5054

ANALYSIS TYPES OF UMBILICAL CORD CARE ON THE LENGTH OF TIME LOOSE ON NEWBORN BABIES IN KALISAPU VILLAGE

Masturoh[1], Siswati[2], Ike Putri Setyatama[3]
[1, 2, 3] Stikes Bhakti Mandala Husada Slawi
masturoh87@gmail.com[1], jinanalmira@gmail.com[2] ike.putri.setyatama@gmail.com[3]
[1)2)3)]Midwifery Diploma Program, STIKes Bhakti Mandala Husada Slawi, 16 Cut Nyak Dhien Street, Kalisapu, Slawi, Tegal Regency, Indonesia

ARTICLE INFORMATION

Received:
May 05, 2021

Revised:
June 10, 2021

Accepted:
June 18, 2021

Available Online:
June 30, 2021

Abstract

Umbilical cord care is a care activity for the umbilical cord from a baby born, the umbilical cord is cut until the umbilical cord is loose. There are various cord care techniques that can affect the length of time the cord is broken. The purpose of this study was to determine the differences in various umbilical cord care techniques on the length of time to detach the umbilical cord. This research was conducted using a retrospective approach. Sampling with total sampling technique. The sample size was 31 infant mothers in Kalisapu Village. The independent variable in this study is a variety of cord care as the dependent variable. The data collection technique uses a checklist sheet. The data analysis technique used Kendall Tau. The analysis showed that there was a relationship or influence between umbilical cord care and the length of time the umbilical cord was removed with a value of p = 0.001. Among the four umbilical cord care techniques, the majority of the loss of the umbilical cord for 5-7 days was with dry gauze, namely with a proportion of 51.61%, compared to umbilical cord care with 10% povidone iodine, 10% gauze and povidone iodine, and there were no respondents with treatment. the umbilical cord openly. There is an effect of the type of cord care on the length of time the umbilical cord was loose.

Keywords: *Types of umbilical cord care, The length of time the umbilical cord was loose*

Correspondence:
Masturoh, Midwifery Diploma Program, STIKes Bhakti Mandala Husada Slawi, 16 Cut Nyak Dhien Street, Kalisapu, Slawi, Tegal Regency, Indonesia
masturoh87@gmail.com

1. Introduction

One of the major health problems in the world is infant mortality. Based on the Indonesian Demographic and Health Survey in 2017, infant mortality was 24/1,000 live births and neonatal mortality was 15/1,000[1]. The majority of deaths occur in the neonatal period, prematurity and infection are the main courses, one of which is infection through the umbilical cord[2]. In developing countries, umbilical cord infection is also a major cause of neonatal death and a significant risk factor for death[3].

p-ISSN: 2089-6778
e-ISSN: 2549-5054

According to Hidayat (2011) in Putri E and Limoy M (2019), one of the efforts that can be done to reduce infant mortality is through various standardized umbilical cord care, in order to prevent infection in infants. One of the causes of umbilical cord infection is the pathogenic microorganism *Staphylococcus aureus or called Clostridia*[4].

To prevent infection in the umbilical cord, that is with proper care of the umbilical cord[5]. In society there are various ways of caring for the umbilical cord, including open umbilical cord care, only with sterile gauze, sterile gauze and alcohol, sterile gauze and betadine. So that we are interested in knowing whether there is an effect of umbilical cord care on the length of time loose on neonates.

2. Methods

This research is a quantitative research using an observational with a retrospective approach. The research held on December 2020. The population used is mothers who have neonates in Kalisapu Village, Slawi District, Tegal Regency with a sample of 31 respondents. The sample criteria were selected based on the inclusion and exclusion criteria, namely babies born normal, not premature, normal weight and no complications.

The sampling technique is carried out by total sampling. The research instrument used was a checklist about umbilical cord care carried out by the mother with direct observation.

The method of data collection was carried out with structured observations and measurements where the researchers made direct observations before the umbilical cord care intervention was carried out according to standards.

This study uses non-parametric statistical tests, retrospective approaches, observation methods and Kendal tau statistical test, which are statistical tests based on ranking with data in the form of ordinal data.

3. Results and Discussion

1) Characteristics of Respondents Based on Type of Cord Care

Table 1. Proportion of Characteristics Respondents by Type of Cord Care

Umbilical Cord Care	Total	%
Sterile Gauze	16	51,61
Betadine	6	19,35
Sterile Gauze & Betadine	9	29,03
Open	0	0,00
Total	31	100

Source: Primary Data

Based on the results of the analysis in Table 1 shows that the majority of respondents to carry out umbilical cord care using sterile gauze with a proportion of 29.03% (9 respondents) and there are 6 respondents (19.35%) using betadine only.

p-ISSN: 2089-6778
e-ISSN: 2549-5054

2) Characteristics of respondents based on the length of time the umbilical cord loose

Table 2. Proportion of Characteristics of Respondents Based on the Length of Time the Umbilical Cord Loose

The length of time the umbilical cord loose (Day)	Total	%
1-4	0	0,00
5-7	16	51,61
> 7	15	48,39
Total	31	100

Source: Primary Data

Based on the results of the analysis in Table 2 shows that the majority of respondents loose the umbilical cord for 5-7 days with a proportion of 51.61% (16 respondents), while respondents with length of time the umbilical cord loose >7 days were not much different namely 48.39% (15 respondents), and there is no respondent with length of time the umbilical cord loose 1-4 days (0.00%).

3) Characteristics of Respondents Based on Umbilical Cord Care with Sterile Gauze

Table 3. Proportion of Characteristics of Respondents Based on Umbilical Cord Care with Sterile Gauze

The length of time the umbilical cord loose	Frequency	%
1-4	0	0,00
5-7	13	81,25
> 7	3	18,75
Total	16	100

Source: Primary Data

Based on the results of the analysis in Table 2 shows that 8 respondents with sterile gauze and dry umbilical cord care took longer than 7 days (18,75%) and 13 respondents took 5-7 days (81,25%) of umbilical cord loose.

4) The Effect of Types Umbilical Cord Care on the Length of Cord Loose

Table 4. Bivariate Analysis of the Effect of Umbilical Cord Care on the Length of Umbilical Cord Care

Variable	The length of time the umbilical cord loose						Total		P value
	f	%	F	%	F	%	N	%	
	1-4 day		5-7 day		>7 day				
Sterile Gauze	0	00,0	13	81,25	3	18,75	16	100	
Betadine	0	00,0	2	33,33	4	66,67	6	100	
Sterile gauze & Betadine	0	00,0	1	11,11	8	88,89	9	100	0,001
Open	0	00,0	0	00,0	0	00,0	0	0,00	
Total	0	00,0	16	51,61	15	48,39	31	100	

Source: Primary Data

Based on the results of statistical analysis in Table 4, the researcher used the Kendall tau statistical test, which is a statistical test based on ranking with data in the form of ordinal data. The results of the statistical test showed that there was a correlation or effect between umbilical cord care and the length of umbilical cord loose with p value: 0,001. The new method of umbilical cord loose faster than the older

DOI: 10.30591/siklus.v10i2.2478

p-ISSN: 2089-6778
e-ISSN: 2549-5054

umbilical cord method. The following is a discussion of the results of the analysis:

Univariate Analysis

1. Umbilical Cord Care with Sterile Gauze

   According to Safudin (2002) in Wahyuningsih and Wahyuni (2017) dry umbilical cord care is the treatment of covering the umbilical cord with sterile gauze loosely without applying any substance to the umbilical cord[6]. In the umbilical cord care with sterile gauze, the results showed that the majority of respondents took the umbilical cord loose 5-7 days with a proportion of 81,25% (13) and there were 3 respondents with a length of umbilical cord loose >7 days with a proportion of 18,75%. These results are in accordance with the results of the Andeirene and Akhir (2020), with the results that 60% of respondents were treated with sterile gauze and the umbilical cord care loose for 5-7 days [5]. The umbilical cord loose faster with the sterile gauze because the sterile gauze absorbs water that is still discharge the umbilical cord[4]. This is supported by the results of research Medhyna V and Nurmayani (2020) with the average results of respondents with sterile gauze umbilical cord care, the length of time the umbilical cord loose is 7 days[7].
2. Umbilical Cord Care with Betadine

   Respondents who took umbilical cord care with betadine, the length of umbilical cord loose tended to be longer than 7 days with a proportion of 66,67%. This is contrast to the research of Andeirene and Akhir (2020), which states that umbilical cord care with betadine is quite effective with results in the proportion of 60% of respondents. This is because 10% betadine can prevent the development of microorganism so as to prevent infection[5]. However, according Asiyah (2017) topical use can inhibit the normal process of colonization which can inhibit the separation of the umbilical cord[8].
3. Umbilical Cord Care with Sterile Gauze and Alcohol

   Umbilical cord care with the sterile gauze and alcohol showed that 8 respondents with the sterile gauze and alcohol the umbilical cord loose for more than 7 days (88,89%) and 1 respondents took 5-7 days (11,11%). These results are in accordance with the results of Astutik's (2016) which states that all respondents with umbilical cord care use 70% alcohol gauze for umbilical cord loose >7 days[9]. The results of the study are not in accordance with the results of research by Rahayu and Widjajanti (2017), namely 80% of respondents who have had their umbilical cord loose for 4-7 days[10].

   Based on JNPK-KR (2012) in Pitriani R, Damayanti IP and Afni R (2017) umbilical cord care is based on a government permanent program that is not allowed to wrap the umbilical cord or

p-ISSN: 2089-6778
e-ISSN: 2549-5054

apply any liquid or material to the umbilical cord[11].

Analisis Bivariat

Based on Table 6 shows that there is a correlation or effect umbilical cord care and the length of umbilical cord loose with a P value: 0,001. These results are in accordance with Rossiani and Novita's (2020) research which states that there is an effect of umbilical cord care with umbilical cord loose[12]. The new method of umbilical cord care, the umbilical cord loose faster than the older umbilical cord care method. The umbilical cord loose from the center by the process of dry gangrene. Initially the umbilical cord looks moist and sticky because of the fluid that collects at the base of the umbilical cord which begins with enlargement of white blood cells in the process of umbilical cord loose[13].

There are several factors that effect the length of time the umbilical cord loose including the presence of infection, how to care for the umbilical cord, the humidity of the umbilical cord and the cleanliness of environmental sanitation[14].

In Asiyah (2017) states that good and correct umbilical cord care will have a positive impact, namely the length of the umbilical cord loose is 5-7 days without any complications. Improper care of the umbilical cord causes the umbilical cord to become loose for a long time[8].

4. Open Umbilical Cord Care

   Cutting the umbilical cord care at the time the baby is born means that the blood supply from the mother to the baby stops. The umbilical cord left in the baby will dry up and loose, this is affected by the exposure of the umbilical cord to the surrounding air[15]. The results of research by Pitriani et al (2017) respondents with open umbilical cord care the average umbilical cord loose is 6 days [11]. In this study, there were no respondents with open umbilical cord care. Researchers assume that respondents prefer other umbilical cord care because the umbilical cord is closed with sterile gauze, so bacteria will not enter the umbilical cord.

4. Conclusion

Based on the results of the study, it can be concluded as follows:

a. Most of the respondents performed umbilical cord care with sterile gauze.
b. Respondents who treated the umbilical cord with sterile gauze were mostly 5-7 days apart with a proportion of 81,25% compared to betadine and betadine sterile gauze treatment.
c. There is a difference between the type of umbilical cord care and the length of the umbilical cord loose.

DOI: 10.30591/siklus.v10i2.2478

p-ISSN: 2089-6778
e-ISSN: 2549-5054

5. Bibliography

1. Lengkong, G. T., Langi, F. L. F. G., & Posangi, J. (2020). Faktor Fator Yang Berhubungan Dengan Kematian Bayi Di Indonesia. *Jurnal Kesmas*, *9*(4), 41–47.
2. Trijayanti, W. R., Martanti, L. E., & Wahyuni, S. (2020). Perbedaan Perawatan Tali Pusat Tertutup dan Terbuka Terhadap Lama Pelepasan Tali Pusat. *Midwifery Care Jorunal*, *1*(2), 13–23.
3. Ozdemir, H., Bilgen, H., Topuzoglu, A., Coskun, S., Soyletir, G., Bakir, M., & Ozek, E. (2017). Impact of different antiseptics on umbilical cord colonization and cord separation time. *Journal of Infection in Developing Countries*, *11*(2), 152–157. https://doi.org/10.3855/jidc.7224
4. Putri, E., Limoy, M.(2019). Hubungan Perawatan Tali Pusat Menggunakan Kassa Kering Steril Sesuai Standar Dengan Lama Pelepasan Tali Pusat Pada Bayi Baru Lahir Di Puskesmas Siantan Hilir Tahun 2019. *Jurnal Kebidanan*, 9(1), 302-310
5. Andreinie, R., Akhir, J. (2020). Efektifitas Berbagai Metode Perawatan Tali Pusat Terhadap Lamanya Pelepasan Tali Pusat Pada Bayi Baru Lahir Di BPM Yosephine Palembang. *Jurnal Kesehatan Abdurahman Palembang*, 9(1),34-39.
6. Wahyuningsih, E., & Wahyuni, S. (2017). Perbedaan Perawatan Dengan Kasa Steril Dan Povidone Iodine 10% Terhadap Lama Lepas Tali Pusat Pada Bayi Di Wilayah Puskesmas Karanganom Kabupaten Klaten. *Motorik*, *12*(24).1-9
7. Medhyna, V., Nurmayani. (2020). Perawatan Tali Pusat Dengan Kasa Kering Terhadap Lama Pelepasan. *Universitas Fort De Kock Bukittinggi*, *10*(2), 955–960.
8. Asiyah, N., Islami, I., & Mustagfiroh, L. (2017). Perawatan Tali Pusat Terbuka Sebagai Upaya Mempercepat Pelepasan Tali Pusat. *Indonesia Jurnal Kebidanan*, *1*(1), 29. https://doi.org/10.26751/ijb.v1i1.112
9. Astutik, P. (2016). Perawatan Tali Pusat dengan Tehnik Kasa Kering Steril dan Kasa Alkohol 70% terhadap Pelepasan Tali Pusat pada Bayi Baru Lahir (Di Wilayah Kerja Puskesmas Sumbersari Saradan Kabupaten Madiun). *STIKes Satria Bhakti Nganjuk*, 42–51.
10. Rahayu, A. S., & Widjajanti, C. (2017). Perawatan Tali Pusat Menggunakan Kasa Steril Dan Kasa Alkohol 70 % Terhadap Lama Lepasnya Tali Pusat. *Ijohns*, *2*(1), 1–5
11. Pitriani., Damayanti., Afni. 2017. Umbilical Cord Care Effectiveness Closed and Open To Release Cord Newborn. *Jurnal Doppler Universitas Pahlawan Tuanku Tambusai*. 1(2). 58-61.
12. Rossiani, D., & Novita, R. V. T. (2020). Perbedaan Pelepasan Tali Pusat Dengan Perawatan Terbuka Dan Kassa. *Dinamika Kesehatan: Jurnal Kebidanan Dan Keperawatan*, *11*(1), 243–252. https://doi.org/10.33859/dksm.v11i1.541
13. Cuningham, FG., et al,2013. Obstetri Williams Jakarta: EGC
14. Reni, D. P., Nur, F. Ti., Cahyanto, E. B., & Nugraheni, A. (2018). Perbedaan Perawatan Tali Pusat Terbuka Dan Kasa Kering Dengan Lama Pelepasan Tali Pusat Pada Bayi Baru Lahir. *PLACENTUM: Jurnal Ilmiah Kesehatan Dan Aplikasinya*, *6*(2), 7. https://doi.org/10.20961/placentum.v6i2.22772
15. Noorhidayah, Fakhriyah, Isnawati, & Tazkiah, M. (2015). Efektifitas Perawatan Tali Pusat Teknik Kering dan Terbuka terhadap Lama Puput Tali Pusat. *Jurnal Publikasi Kesehatan Masyarakat Indonesia*, *2*(1), 38