



Increased Intestinal Peristaltis after Sectio Caesarea with Early Mobilization

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ABSTRACT

The process does not always run as it should or normally so it will require an operation (sectio caesarea) to be able to give birth to a baby with the aim of the safety of the mother and the baby itself. Surgery that is less risky and shorter can be done by giving spinal anesthesia. This technique of giving anesthesia is easier with only one time, shorter and simpler, faster and safer and more satisfying action for the mother in labor. The importance of early mobilization in laboring mothers to prevent abdominal muscle stiffness and will restore intestinal peristalsis. Because spinal anesthesia can affect the extremities and digestive tract. The purpose of this study was to determine the effect of early mobilization on the recovery of intestinal peristalsis post sectio caesarea with spinal anesthesia in Benda Pekalongan Hospital. This research method is quasi-experimental research with one control group, each group has 27 respondents. The intervention group was mobilized early from the hospital plus the investigator and the control group were mobilized from the hospital. In this study using a cone sampling technique. By testing the influence of Wilcoxon then with the Mann-Whitney difference test. The results showed that there was an effect of early mobilization on the recovery of intestinal peristalsis post sectio caesarea with spinal

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ABSTRAK

Proses persalinan yang tidak selalu berjalan seperti layaknya atau normal sehingga akan memerlukan salah satu tindakan operasi (sectio caesarea) untuk dapat melahirkan bayi dengan tujuan demi keselamatan ibu dan bayi itu sendiri. Tindakan operasi yang tidak banyak memberikan risiko dan lebih singkat dapat dilakukan dengan pemberian anestesi spinal. Teknik pemberian anestesi ini lebih mudah dengan hanya satu kali suntikan, lebih singkat dan sederhana, onset tindakan lebih cepat dan lebih aman dan memuaskan bagi ibu bersalin. Pentingnya mobilisasi dini pada ibu bersalin untuk mencegah kekakuan otot perut dan akan mengembalikan kerja peristaltik usus. Karena anestesi spinal dapat mempengaruhi ekstremitas dan saluran pencernaan. Tujuan penelitian ini adalah untuk mengetahui pengaruh mobilisasi dini terhadap pemulihan peristaltik usus post sectio caesarea dengan anestesi spinal di RSUD Benda Pekalongan. Metode penelitian ini adalah penelitian quasi eksperimen dengan satu kelompok kontrol setiap kelompok ada 27 responden. Kelompok intervensi dimobilisasi awal dari rumah sakit ditambah peneliti dan kelompok kontrol dimobilisasi dari rumah sakit. Dalam penelitian ini menggunakan teknik pengambilan sampel kerucut. Dengan menguji pengaruh Wilcoxon kemudian dengan uji beda Mann-Whitney. Hasil penelitian menunjukkan bahwa ada pengaruh mobilisasi dini terhadap pemulihan peristaltik usus post sectio caesarea dengan spinal

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INTRODUCTION

Labor are physiological events, in the process of childbirth and birth there is an expulsion of the baby, placenta, and membranes from the uterus through the birth canal. However, the childbirth process is not always smooth, there are obstacles and surgery (sectio caesarea) that must be carried out, either because of considerations to save the mother and baby or the mother's personal desire. Sectio caesarea is an action to give birth to a baby through an incision in the uterine wall that is still intact (Eriyani, 2017). Indications that the most important thing to do cesarean section including presentation breech, prolonged birth including failure to progress during labor, intrauterine hypoxia and a history of cesarean section previos caesarea (Fitria & Erika, 2019).

One shot spinal anesthesia is easier, because it is simpler, faster onset of action, and safety also provides higher maternal satisfaction due to early skin-to-skin contact with the baby (Kajal, 2018). There is minimal risk of regurgitation and aspiration stomach contents under spinal anesthesia. There is minimal transfer of drug across the placenta to the fetus and even when transferred, there is minimal risk of fetal toxicity. Mom is awake and can enjoy meeting with her baby (Lundgren & Howell, 2019). So in this case spinal anesthesia has an impact on the manipulation of abdominal organs and reduces maternal intestinal peristalsis as well as abdominal distension and posoperative sectio caesarea (Sumaryati, Widodo, & Purwaningsih, 2018).

The World Health Organization (WHO) statse that the majoity of 5-15% of a country perform Sectio Caesarea. Indonesia has exceded this standard where government hospitals have an average of 11% while private hospitals have exceeded 30% of the number of sectio caesarea. Sectio Caesrea continues to increase from 3-4% 15 years ago, to an incidence of 10-15% today (Susilo, 2019).

The recovery of intestinal peristalsis caused by spinal anesthesia is influenced by several factors such as age, fluid intake, psychological factors, anesthesia during surgery, and physical activity or mobilization (Ningrum, Azhima, & Suratun, 2020). One of the post sectio caesarea nursing interventions early mobilization. Early mobilization is beneficial for cesarean section patients it reduces muscle weakness. Adequate knowledge about the risk population muscle disorders is essential, and the two proven main risks are mechanical ventilation for a long time and immobility (Miranda Rocha et al., 2017).

Early mobilization of post sectio caesarea is a movement or activity carried out by the mother after a few hours of giving birth. Early mobilization can affect the postoperative mother physically, because it affects the cardiovascular system by increasing cardiac output, strengthening the heart muscle, ensuring smooth circulation, increasing body metabolism regulation, restoring physical work function and maintaining vital signs within normal limits which is speed up the process of wound recuperation so the risk of infection does not occur (Sumaryati, Widodo, & Purwaningsih, 2018). Of course, early mobilization can also stimulate peristalsis,

increase duct tone digestion, prevent constipation and eliminate distension of the mother's abdomen post sectio caesarea (Katuuk, 2018). Otherwise, it exercises muscles and joints after surgery to prevent stiffness. In the digestive system, it increases gastric mobility and increases stomach muscle tolerance (Herman, Santoso, & Yunitasari, 2020).

Disadvantages if you don't do early mobilization for post sectio mtohers caesarea is the mother can have difiiculty defecating and urinating, gastric distensiin, respiratory and cardiovascular disorders (Wahyuningsih, 2017). In addition, the impact of not doing early mobilization on mothers post sectio caesarea uterine involution is not good, and increase in body temperature (Nisa Afina et al., 2020). Tdelayed mobilization can cayse several organ dysfunctions, including obstruction of blood flow and impaired muscle function (Lema, Mochen, & Barimbing, 2019). Early mobilization can aslo prevent complications such as pulmonary embolism and thrombophlebitis (Nurfitriani, 2017).

METHOD

The method used is quasi-experimental with one control group pre-post test. The sample of this study used the Consecutive Sampling technique. Data collection uses SOP (standard operating pro procedure) and has obtained ethical feasibility with no. e-KEPK/POLKESYO/0795/XI/2021 With the inclusion criteria of post sectio caesarea mothers who are willing to be our respondents, mothers have undergone sectio caesarea ASA 1-2 and are early adults aged 20-35 years.

This study was conducted from August to October 2021. The sample of the study was post-sectio caesarea pregnant women with spinal anesthesia with a total of 54 respondents. In taking the researcher took all the subjects according to the inclusion criteria until the minimum number of subjects was met. The instruments used are SOPs for early mobilization and observation sheets. The tools used to measure intestinal peristalsis are stethoscopes and watches.

The normality test used in this study was the Shapiro-Wilk test, because the number of respondents in this study was less than 50 people. Analysis of the data used in the nonparametric test is the Wilcoxon Signed Rank Test and the Mann Whitney difference test.

RESULTS AND DISCUSSION

This research was conducted for 2 months, from August to October 2021 in A total of 54 samples in this study had been met the inclusion and exclusion and exclusion criteria which were divided into two groups, each consisting of 27 respondents.

Table 1
The Characteristics of Respondents

Variable	Kelompok					
	Intervensi		Kontrol		Intervensi	Kontrol
	F	(%)	F	(%)	Mean ± SD	Mean ± SD
1. Level of Education						
a. Grade school	2	(7.4%)	1	(3.7%)		
b. Junior high school	4	(14.8%)	4	(14.8%)		

c. Senior high school	10	(37%)	10	(37%)
d. University	11	(40.7%)	12	(44.4%)
2. ASA				
a. ASA 1	15	(55.6%)	14	(51.9%)
b. ASA 2	12	(44.4%)	13	(48.1%)
3. Parity				
a. Primiparous	12	(44.4%)	12	(44.4%)
b. Multiparous	15	(55.6%)	15	(55.6%)
4. Job				
a. Doesn' t Work	12	(44.4%)	10	(37%)
b. Work	15	(55.6%)	17	(63%)
5. Age			23.00±3.1	25.14±3.1

Based on the table 1, the majority of respondents in each group in terms of the characteristics of higher education are universities with ASA 1 most in both groups. The parity type both have 15 people in multiparous parity type. Both groups the majority of mothers were working and had an age range of approximately 23 years old in the intervention group and in the control group most were 25 years old.

Table 2
Mean Intestinal Peristalsis in Both Groups

Interstinal Peristalsis	Mean ± SD	
	Intervention	Control
Before	5.29±0.66	4.92±4.7
After	6.00±0.67	5.44±0.50

The table showed the average frequency of intestinal peristalsis of respondents in the intervention group before doing early mobilization is 5.2x/minute and after the intervention had an average intestinal peristalsis to be 6x/minute. While the control group had an average intestinal

Table 4
Wilcoxon test

		N	Mean Rank	Sum of Ranks	Asymp. Sig (2-tailed)
Peristalsis in every minute after Intervention – peristalsis In every minute before intervention	Negative Ranks	0	0.00	0.00	0.000
	Positive Ranks	19	10.00	190.00	
	Ties	8			
	Total	27			
Peristalsis in every minute after control – peristalsis in every minuta before control	Negative Ranks	0	0.00	0.00	0.000
	Positive Ranks	13	7.00	91.00	
	Ties	14			
	Total	27			

Based on the table above, neither group experienced a decrease in intestinal peristalsis. The intervention group there were 19 people who experienced an increase in the frequency of intestinal peristalsis and in the control group there were 13 people. While in the intervention group there were 8 people who did not experience changes in bowel

Table 5
Mann Whitney test

Group	N	Mean rank	Sum of Ranks	Mann Whitney	Wilcoxon	Sig (2-tailed)
Post intervention	27	33.33	900.00	207.000	585.000	0.003
Post control	27	21.67	585.00			

The difference in the mean rank with p value of 0.003 indicates that there is a difference in the results of early mobilization in the intervention group and the control group

peristalsis of respondents before early mobilization was 4.9x/minute and after early mobilization the average intestinal peristalsis was 5.4x/minute.

Table 3
Normality Test

Category	Uji Saphiro Wilk		
	Statistics	Df	Sig
Pre-Test Intervention Group	0.780	27	0.000
Post Test Intervention Group	0.802	27	0.000
Pre-Test Control Group	0.646	27	0.000
Post Test Control Group	0.634	27	0.000

From the table above, the results normality test of the Saphiro Wilk test are shown. The significance can be seen from the probability value (p). In the table above, the sig value is 0.000, which means the data is not normally distributed.

frequency and in the control group there were 14 people who did not experience changes in instestinal peristalsis frequency. The results obtained a p value of 0.000 (<0.05), which means that there is an effect of early mobilization on the recovery of intestinal peristalsis in post sectio caesarea mothers with spinal anesthesia.

on the frequency of intestinal peristalsis of post sectio caesarea with spinal anesthesia.

Spinal anesthesia makes the lower half of the mother's body numb, but the mother remains awake and conscious during the operation. With the technical of spinal anesthesia, the mother feels the birth of the baby without feeling pain. Spinal anesthesia works by inhibiting nerve cells in the subarachnoid space by using local anesthetic drugs to relieve sensation in body parts (Fahrudin, 2017).

The advantages of this spinal anesthesia are simpler and more effective to use, where the sensory and motor blockade system is better, and can reduce the stress response, gastrointestinal function can recover faster, and can reduce surgical wound bleeding (Fahrudin, 2017). Spinal anesthesia has a good effect on organ manipulation, by inhibiting parasympathetic nerve impulses to the intestinal muscles which can cause abdominal distension and decrease intestinal peristalsis for about 1-2 days (Ningrum et al. 2020). The patient is declared to have recovered from spinal anesthesia if the bromage score has reached 2 (Fitria et al., 2019).

Normally, the peristalsis waves of the mother's intestine can return in approximately one day or 24 hours post-sectio caesarea without complications in the patient. The frequency of intestinal peristalsis is also caused by food intake (Chalik, 2016). According to Jitowiyono et al., (2017) intestinal peristalsis is also caused by the age factor where the higher the age the weaker the intestinal peristalsis in the body. It is better if the mother's intestinal peristalsis can return faster to avoid complications that can occur such as paralytic ileus. This is in line with the theory of Potter and Perry (2010) and Kozier, et al., (2010) in Safitri, (2016) that after the surgery is complete, the patient will be conscious but the anesthetic effect still affects the patient which can cause various postoperative complications, one of which is decreased peristalsis.

If the mother's intestinal peristalsis is not immediately normal due to the mother are being lazy in activities, this can have a bad effect which results in the risk of complications in the lungs and nosocomial infections, and it will take longer for the mother to get nutrition by eating and drinking through the mouth so that the healing process post sectio caesarea is blocked. For this reason, the health workers can do to help post sectio caesarea recovery by providing early mobilization (Safitri, 2016).

Early mobilization of post sectio caesarea is a movement, or activity carried out by the mother after a few hours of giving birth. The first stage of is 6 hours. The first time after surgery the patient can move his arms, hand and feet fingers, and move both feet. This can be caused by mother only focuses on moving the leg area because she wants to hurry up can do other activities beside lying in bed (Sumaryati, 2018).

Mobilization is very important in accelerating hospitalization so that reduce risk due rest prolonged lying down such as the occurrence of pressure sores, muscle stiffness and breathing. There are also peristaltic and voiding disorders (Elis Roslianti, Yanti Srinayanti, Jajuk Kusumawaty, 2020).

Post sectio caesarea mobilization is a movement, the position with Sectio Caesarea to restore the functions of the body such as intestinal peristalsis, blood circulation, reducing pain, and increasing abdominal muscle tolerance (Heryani, 2017). Based on Guyton (2014) in Puspitasari (2017), states that movement in early mobilization can cause contractions between smooth muscle and calcium ions that enter the muscle. Then, the calcium ion binds to the calmodulin ion (a protein regulator). The combination of these two ions activates the myosin kinase (an enzyme that

performs phosphorylase). Myosin kinase then phosphorylates the myosin head and binds to the active filament which causing the intestinal muscles to contract, minimizing abdominal distension. In teaching early mobilization techniques, it is easy for mothers to do because most mother are highly educated so it is easy to absorb information (Andhika, R.F & Limayanti 2019).

Heryani & Denny, (2017) stated that early mobilization can accelerate the recovery of post-sectio caesarea mothers and make them return to their activities immediately. Early mobilization is beneficial in accelerating blood circulation and restoring the frequency of intestinal peristalsis sound or wound healing in mothers after undergoing sectio caesarea. This statement is supported by (Herman et al., 2020) which shows that early mobilization has influence of intestinal peristalsis post sectio caesarea patients at Kendari Hospital.

LIMITATION OF THE STUDY

Our research only focused on one gender and one type of surgery, so we could not make a wider comparison of the different types and did not compare respondents who were mobilized early and not.

CONCLUSIONS AND SUGGESTIONS

In this study, it can be concluded that there is a difference in mean frequency of maternal intestinal peristalsis before and after early mobilization. The results showed that there was an effect of early mobilization on the recovery of intestinal peristalsis post sectio caesarea with spinal anesthesia.

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Conflict of Interest Statement

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