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Effect of Early Mobilization on Intestine Peristaltic in Post Laparatomy Surgery in Inpatient Room

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Abstract

Mobilization is an independent action for a nurse in carrying out nursing care for post-surgical patients. Many benefits can be achieved from early postoperative mobilization exercises, including increasing the speed of breathing depth, increasing circulation, increasing urination and metabolism. Laparotomy is an action involving the abdominal cavity that can be performed with open surgery. This research aims a. maintain body functions and prevent deterioration and restore the range of motion of certain activities so that sufferers can return to normal or at least be able to meet their daily needs. b. Streamlining blood circulation. c. helps breathing to become strong for and to determine the effect of early mobilization on intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital. The research design used in this study was a quasi-experimental design: non-equivalent control group design. This research was carried out by providing intervention in the form of giving early mobilization. While the control group was not given any treatment by the researchers apart from observing intestinal peristalsis. Sampling was carried out by purposive sampling method with a total sample of 30 people consisting of a control group and a treatment group of 15 people each, then the results were tested by means of the Independent Sample T-Test with a significance level of $\alpha = 0.05$. The results of this study found that changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the group given early mobilization (treatment group) averaged 11.200 (±0.262), changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the control group the average was 1.533 (± 0.723), and there was an effect of early mobilization on changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital ($p=0.001$). The conclusion is that early mobilization can increase intestinal peristalsis in post-laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital so that it is expected that health workers will continue to carry out early mobilization in post-laparotomy patients and in post-laparotomy patients as early as possible to speed up the recovery process. function of the patient's digestive system.

Keywords: Early Mobilization, Intestinal Peristalsis, Patients, Postoperative, Laparotomy

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1. Introduction

Ministry of Health (Depkes) reports regarding the incidence of laparotomy increased from 162 in 2005 to 983 cases in 2006 and 1,281 cases in 2007. Based on the 2009 National Tabulation Data of the Ministry of Health of the Republic of Indonesia, surgery ranks 11th out of the first 50 diseases in hospitals in Indonesia with a percentage of 12.8%, an estimated 32% of which are laparotomy surgery (MOH, 2010).

Mobilization is a major factor in accelerating recovery and can prevent postoperative complications. Many benefits can be gained from bed training and walking in the early postoperative period (Rihiantoro & Arief, 2017). Early mobilization is a series of activities carried out in postoperative patients that can assist in recovery and avoid postoperative complications, one of which is urinary retention (Frayoga & Nurhayati, 2017).

The purpose of this mobilization is a. Maintain body functions and prevent deterioration and restore the range of motion of certain activities so that sufferers can return to normal or at least be able to meet their daily needs. b. Streamlining blood circulation. c. Helps breathing to become strong (Mubarak et al., 2015).

Laparotomy is an action involving the abdominal cavity that can be performed with open surgery. 70% of operations in hospitals are related to abdominal surgery (Sudoyo, 2014).

Types of laparotomy based on the location and extent of surgery according to Haryono (2012):

1) Midline Incision, which is an incision in the midline of the abdomen.
2) Paramedian incision, which is slightly to the edge of the midline (± 2.5 cm), length (± 12.5 cm).
3) Transverse upper abdominal incision, namely an incision in the upper part, colecystomy and splenectomy surgery.

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4) Transverse lower abdominal incision, namely a transverse incision at the bottom ± 4 cm above the anterior iliac spine, for example in appendectomy surgery.

2. Research Method

The research design used was a quasi-experimental design: non-equivalent control group design, namely an experimental design in which the sample was given measurements before and after treatment in the experimental group and the control group was not treated. The experimental group was given treatment in the form of early mobilization. Before the intervention, the researchers conducted a pre-test to determine intestinal peristalsis, after that an intervention was carried out in the form of early mobilization and then a post-test related to intestinal peristalsis was carried out. While the control group was not given any treatment by the researchers apart from observing intestinal peristalsis. This research was conducted in the Inpatient Room of the Nene Mallomo Regional General Hospital. The population in this study were all postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital as many as 231 people. Sampling in this study used the sampling method, namely purposive sampling, namely sampling carried out based on certain considerations according to the criteria of the researcher with a total sample of 30 people consisting of 15 people in the treatment group and 15 people in the control group.

3. Results And Discussions

a. Result

Table 1
Frequency Distribution Based on the Characteristics of Respondents After Laparotomy Operations in the Inpatient Room of the Nene Mallomo Regional General Hospital

Characteristics	Frequency (N)	Percentage (%)
Age (in years) :		
21-30 years	13	43,3
31-40 years	11	36,7
41-50 years	4	13,3
> 50 years	2	6,7
Gender		
Man	7	23,3
Woman	23	76,7

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Education		
SD	3	10,0
Junior High School	7	23,3
High school	17	56,7
PT	3	10,0
Group		
Treatment	15	50,0
Control	15	50,0

Table 1. Frequency distribution based on the characteristics of the respondents including: age, gender, education, and treatment group. Based on the demographic data of the respondents, it was obtained that the majority of respondents were aged 21-30 years (43.3%). In terms of gender, the majority of respondents were female (76.7%), while in terms of education, more than half of the respondents had high school education (56.7%). The respondents in this study were divided into a control group and a treatment group of 15 people each (50.0%).

Table 2
Description of Intestinal Peristalsis in Postoperative Laparatomy Patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the Experimental Group

Measurement Time	Intestinal Peristalsis		p Value
	Mean	Deviasi	
Pre Test	0,0	0,000	
Post Test	11,200	0,262	0,001
Change	11,200	0,262	

Table 2. Intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital before being given treatment in the form of early mobilization (pre-test) an average of 0.0 (±0.00) and after being given the fifth early mobilization (post-test) average 11.200 (± 0.262). By using the Paired T test, the value of p = 0.001 was obtained for the first measurement to the fifth measurement, which means that there is an effect of early mobilization on changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital.

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Table 3
Overview of Intestinal Peristalsis in Postoperative Laparatomy Patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the Control Group

Measurement Time	Intestinal Peristalsis		p Value
	Mean	Deviasi	
Pre Test	0,0	0,000	0,723
Post Test	1,533	0,723	
Change	1,533	0,723	

Table 3. Regarding intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the control group at the start (pre-test) an average of 0.0 (± 0.00) and at the time of the fifth measurement (post-test) test) average 1.533 (± 0.723). Using the paired t test, the value of p = 0.723 was obtained, which means that there was no change in intestinal peristalsis in post-laparotomy patients in the control group in the Inpatient Room of the Nene Mallomo Regional General Hospital.

Table 4
Differences in Bowel Peristaltic Changes in Postoperative Laparatomy Patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the Control Group and the Experiment Group

Group	Changes in intestinal peristalsis		p Value
	Mean	Deviasi	
Treatment	11,200	0,262	0,001
Control	1,533	0,723	
Difference	9,667		

Table 4. Changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the treatment group an average of 11.200 (± 0.262) and in the control group an average of 1.533 (± 0.723) with an average difference of 9.667 . By using an independent sample t test, the value of p = 0.001 was obtained, which means that there is an effect of early mobilization on changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital.

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b. Discussion

The results of this study found that intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital showed that in the post test most of the treatment group experienced hypoperistalsis (73.3%) while in the control group all experienced hypoperistalsis (100%). This shows that in general there has been an increase in intestinal peristalsis in the group that underwent early mobilization.

Based on the results of statistical tests, it was found that there was an effect of early mobilization on changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital, while in the control group there was no change in postoperative laparotomy patients in the Inpatient Room of the Nene Regional General Hospital. Mallomo.

The results of this study are in line with research conducted by Yuannita (2007) who conducted a case study in the Brawijaya Room RSD Malang Regency found that physical mobilization had an effect on the occurrence of flatus in post-cesarean section mothers. Meanwhile, research conducted by Ambarwati (2011) found that there was an effect of early mobilization with restoration of intestinal peristalsis in post-laparotomy clients in the Surgical Treatment Room of RSU Dr. Sutomo Surabaya. Another study conducted by Isrofi (2011) found that early mobilization 2 hours postoperatively was more effective than mobilization 6 hours postoperatively for the recovery of intestinal peristalsis in postoperative appendectomy patients with subarchnoid block anesthesia at Jemursari Hospital in Surabaya.

This is supported by Potter & Perry (2010) who argued that someone who underwent laparotomy surgery would be given general anesthesia which causes normal colonic movements to decrease by inhibiting parasympathetic stimulation of the colon muscles. Clients who received local anesthesia will experience something like that too. Surgery that directly involves the intestines can cause temporary cessation of bowel movements. This is called paralytic ileus, a condition that usually

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lasts 24 – 48 hours. Hearing bowel sounds that reflect intestinal motility is an important matter in post-surgical nursing management.

The results of this study are in line with those stated by Smeltzer & Bare (2002) that postoperative laparotomy patients should be mobilized with the aim of preventing complications. But in general, postoperative laparotomy patients often experience limited movement and tend to be in a horizontal position which will cause dramatic changes in various systems in the body, not only the musculoskeletal system, but also other systems including the digestive system. This is caused by the patient's concern and fear that if the incision moves, it will open or because the patient's experience if it moves will cause a feeling of pain, so the patient chooses not to mobilize.

The results of this study indicate that early mobilization in post-laparotomy patients can help the patient's intestinal peristalsis recovery process where early mobilization is possible considering post-laparotomy patients are recommended to mobilize as early as possible.

4. Conclusion

a) Intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the group given early mobilization (treatment group) was averagely normal.

b) Intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital in the control group averaged low.

c) There is an effect of early mobilization on changes in intestinal peristalsis in postoperative laparotomy patients in the Inpatient Room of the Nene Mallomo Regional General Hospital.

5. Compliance with ethical standards

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Hospital has provided facilities related to the implementation of the research. Hopefully in the future it can be useful for society.

Disclosure of conflict of interest

his research collaboration is a positive thing for all researchers so that conflicts, problems and others are absolutely no problem for all writers.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

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