

A Study to Assess the Effectiveness of Abdominal Exercise on Gastric Motility among Post Operative Patients in Selected Hospital, Greater Noida, Uttar Pradesh

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Abstract: Introduction: The surgical procedures and anesthesia plays the patient at risk for several complications or adverse events. The most common post operative discomforts are nausea, vomiting, restlessness, sleeplessness, thirst, constipation, flatulence and pain. Aim: To assess the effectiveness of abdominal exercise on gastric motility among post - operative patients. Methods: Quasi experimental, Post - test only control group design was selected. Total 48 patients were selected (24 in experimental group and 24 in control group.) using purposive sampling technique. The abdominal exercise (Abdominal breathing and Tummy tightening breathing) was administered to the patients of experimental group 1 time for 10 minutes on 1st day of surgery and 2 times for 20 minutes on 2nd day of surgery. Result: In pre - test, Experimental group, 12 (50%) patients had absent gastric motility, 12 (50%) patients had irregular gastric motility, and in Control group, 15 (62.5%) of patients had absent gastric motility, and 9 (37.5%) patients had irregular gastric motility. In post - test, Experimental group, 13 (54.2%) of patients had irregular gastric motility and about 11 (45.8%) of patients had regular gastric motility. Whereas in control group, 4 (16.7%) patients had absent gastric motility and 20 (83.3%) of patients had irregular gastric motility. Conclusion: There was a significant improve in gastric motility score among experimental group after the Abdominal Exercise was provided. Thus it proved to be an effective method.

Keywords: Gastric motility, Abdominal exercise, Post - operative patients of abdominal surgery

1. Introduction

In normal digestion, food is moved through the digestive tract by rhythmic contractions called peristalsis. This movement is called "gastric motility." When someone suffers from a digestive motility disorder, these contractions don't work the way they should, potentially leading to a variety of problems¹.

Patients after abdominal surgery have an increased chance of developing paralytic ileus during postoperative period. No bowel sounds are heard during 24 - 72 hours, following major abdominal surgery².

One of the problems that often arise in post abdominal surgery includes: abdominal organ manipulation during surgical procedures can cause a normal peristaltic loss for 24 to 48 hours, depending on the type and duration of surgery³. Post operative nursing is the important and challenging branch of clinical nursing. Especially caring of patients underwent abdominal surgeries is critical for post operative nurses⁴.

2. Literature Survey

A quasi experimental study was conducted to assess the effectiveness of abdominal exercise on gastric motility

among post - operative patients at Lotus Hospital and Research center and Kumarasamy Hospital, Erode (2017). Post - test only control group design was selected. 30 patients were selected using purposive sampling (15 experimental and 15 control group). The findings of the study concluded that, the percentage of patients were in age group of 30 - 44 years, 50% participants were males and remaining 50% were females, most of them were educated and majority of them had undergone appendectomy. In experimental group, the overall mean score of gastric motility (11.6 + - 1.62) which was 97%, whereas in control group the mean score was (7.46+ - 1.77) which was 62%. It reveals the difference of 35%. Unpaired "t" test score was 6.8 at the level of significant (P=0.05)⁵.

3. Methods

A quasi - experimental research design was used in this study. The samples for the study were post - operative patients of abdominal surgery from Sharda Hospital, Greater Noida. Total samples were 48 patients divided into two groups, experimental group (n₁=24), control group (n₂=24). Data collection was done using the tool which consists of two sections Section I: Demographic variables, and Section II: Modified gastric motility assessment scale.

4. Results

The mean score of gastric motility in Experimental group was 5.91 in pre - test and 8.95 in post - test. The standard deviation was 1.05 and 0.95. The mean difference was 3.04 and calculated 't' value was 14.30. The mean score of gastric motility in control group 5.50 in pre - test and 6.54 in post - test. The standard deviation was 0.88 and 1.14. The mean difference was 1.04 and the calculated 't' value was 4.39. There was no significant association with selected demographic variables.

Table 1: Frequency and Percentage of Demographic Variables, $n_1+n_2=48$

S. no.	Demographic Variables	Experimental Group ($n_1=24$)		Control Group ($n_2=24$)	
		F	%	F	%
1.	Age (in years)				
	18 - 28	3	12.5	9	37.5
	29 - 39	9	37.5	8	33.3
	40 - 50	12	50	7	29.2
2.	Gender				
	Male	9	37.5	10	41.7
	Female	15	62.5	14	58.3
3.	Type of Surgery				
	Cholecystectomy	18	75.0	21	87.5
	Appendectomy	6	25.0	3	12.5
4.	Level of Education				
	No formal education	7	29.2	6	25.0
	Primary	5	20.8	5	20.8
	Secondary	7	29.2	8	33.3
	Graduate	3	12.5	5	20.8
	Post Graduate and above	2	8.3	0	0

Table 2: Frequency of Gastric Motility Scores among post-operative patients of experimental and control group, $n_1+n_2=48$

Gastric Motility	Score	Experimental Group ($n_1=24$)		Control Group ($n_2=24$)	
		Pre - test (f)	Post - test (f)	Pre - test (f)	Post - test (f)
Absent	0 - 3	12	-	15	4
Irregular	4 - 13	12	13	9	20
Regular	14 - 23	-	11	-	-

We concluded that during **pre - test**, in experimental group 12 (50%) patients had absent gastric motility, 12 (50%) patients had irregular gastric motility. In control group, 15 (62.5%) patients had absent gastric motility and 9 (37.5%) patients had irregular gastric motility.

During **post - test**, in experimental group, 13 (54.2%) patients had irregular gastric motility and 11 (45.8%) patients had regular gastric motility. In control group, 4 (16.7%) patients had absent gastric motility and 20 (83.3%) patients had irregular gastric motility.

A quasi experimental study was conducted to assess the effectiveness of abdominal exercise on gastric motility among post-operative patients at Lotus Hospital and Research center and Kumarasamy Hospital, Erode (2017). 30 patients were selected using purposive sampling (15 experimental and 15 control group). The findings of the study concluded that, the 50% of patients were in age group of 30 - 44 years, 50% participants were males and remaining

50% were females. This study concluded that abdominal exercise was effective in improving the gastric motility of post-operative patients.

5. Conclusion

Based on the analysis of the findings of the study, the following inferences were drawn. There was a significant improve in gastric motility score among experimental group after the Abdominal Exercise was provided. Thus it proved to be an effective method. Therefore, this intervention should be promoted and implemented to all post-operative patients of abdominal surgery as an effective means of exercise.

References

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