

Research Article



Post-operative Pain and the Activities that Increases Pain among Patients Undergoing Gastrectomy

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ABSTRACT

Pain is one of the most common experiences and stressors in patients undergoing G.I. Surgeries. Patients undergoing gastrectomy may experience frequent and moderate to severe pain postoperatively. The incidence and severity of pain and a multimodal approach (use of a combination of pain control strategies including opioids, NSAIDS, non-pharmacologic intervention) to acute post gastrectomy pain is recommended. The present study was undertaken to assess the level of pain experienced by patients after gastrectomy, to identify the post-operative activities that increases pain and to find out the association between pain score of patients and the selected variables. A descriptive research design was adopted. Setting was Hi-Tech Medical college and Hospital. Sample size was 100 and convenient sampling technique was used. Wong Bakers faces pain rating scale and a validated questionnaire was used as a tool. The maximum obtainable pain score was 19. t-tests showed that the mean pain score on the second post operative day was significantly less than that of first post operative day. Chi-square test reveals that there is significant association between different degrees of pain and the selected demographic variables.

Keywords: Assessment, Post-operative pain, Gastrectomy.

INTRODUCTION

Pain is an individual, subjective and complex bio-Psychosocial process whose existence cannot be proved or disproved. Unrelieved pain is a major psychological and physiological stress for patient (Dewitt, 2009). The patient is the best authority on the existence of pain. Therefore, validation of the existence of pain is based on the patient's report that it exists. Pain is one of the most common experiences and stressors in patients undergoing G.I. Surgeries. Patients undergoing gastrectomy may experience frequent and moderate to severe pain post operatively. The incidence and severity of pain and a multimodal approach (use of a combination of pain control strategies including opioids, non-steroidal anti inflammatory drugs (NSAIDS), non pharmacologic intervention to acute post gastrectomy pain is recommended.

According to Oh. Jeong MD, PhD, Seongyeob Ryu, MD, PhD and Young kyu park MD, phd in all 168 gastric cancer patients after gastrectomy were assessed with respect to evaluate 4 major functional outcomes adequate pain control, ability to mobilize and self-care, tolerance of oral intake and no abnormal physical findings. The mean completion times for each dimension were 4.4 +0.9 days for adequate pain control, 4.1+0.8 days ability to mobilize and self-care. 4.3+ 1.1 days for no abnormal physical signs. The mean length of stay was 7.2 +3.2 days.

Noeliacristina Rodrigues Pimenta Gomes, celiasamarin avilcade Britosantos, Maria Mericia Guveia Rodrigues Bellencourt dejesus conducted a study among cancer patients aged 18 years or more and it was published

between 2005 and 2015. The methodological quality was assessed based on the recommendations of the Joanna Briggs institute. Three studies were include which support the effectiveness of nursing intervention in reducing patients functional and nutritional decline, and improving their cognitive function, knowledge and ability to cope with the disease. Despite the growing recognition for analgesic needs in post-gastrectomy patients, this remains a poorly studied area in gastro-intestinal surgery.¹

The present study was undertaken to assess the level of pain experienced by patients after gastrectomy, to identify the post-operative activities that increases pain and to find out association between pain score of patients and selected variables.

Hypothesis

H1:- There is significant association between different degrees of pain and the activities performed postoperatively.

H2:-There is significant association between different degrees of pain and the demographic variables.

MATERIALS AND METHODS

The study was conducted at a tertiary care hospital of Bhubaneswar city of Odisha. A descriptive research design was chosen for this study. Sample size was 100 and convenient sampling technique was used. A self-prepared validated questionnaire and Wong baker's faces pain scale were used as the tools. The data gathered were organized, tabulated and analyzed using descriptive and



inferential statistics. Hospital ethical committee approved the proposal to conduct the study ahead.^{2,3}

RESULTS AND DISCUSSION

Wong bakers faces pain rating scale (Score = 0-10) and a validated questionnaire about pain experiences after gastrectomy during the first three post operative days, including a four point verbal numerical range scale ranging from "0" (No pain) to 3 (Maximal pain) with three questions score (0-9). Total Pain score was 19. The highest score indicated the highest intensity of pain.^{4&5} Questions about pain aggravating and alleviating activities, post operative day of maximum pain were also included. First assessment was done after 24 hours of surgery. Second and third assessments were carried out on consecutive days after 48 hours and 72 hours of surgery. Most of the patients were shifted to post-operative ward on second or third post operative day.⁶

Fifty six patients underwent gastrectomies during the data collection period. Out of this, 75 > 75% patients were conveniently selected. The age of the participants ranged from 19 to 74 years. Out of these 40 patients, 55 (55%) were males and 45 (45%) were females. Rest had undergone partial gastrectomy.

Hypothesis-Testing

Table 1: Mean, standard deviation and P-valued of pain score according to selected variables

N=100

Characteristics of patients	Mean	Standard deviation	P-Value
Age			
Younger age (<42.5)	8.80	2.04	0.81
Older age (>42.5)	8.65	1.87	
Sex			
Male	8.56	1.99	0.50
Female	8.94	1.89	
Post-operative day			
1 st Postoperative day	8.73	1.935	0.000
2 nd postoperative day	6.25	1.104	
3 rd Postoperative day	2.93	2.280	0.000

The maximum obtainable pain was 19. The range of pain score (mean \pm SD) of patients on first, second and third post-operative day were five to thirteen (8.73 ± 1.94), four to eight (6.25 ± 1.1), and zero to eight (2.93 ± 2.28) respectively. "t" tests showed that the mean pain score on the second post operative day was significantly less than that of first post-operative day ($p=0.000$), and the mean pain score on the third post-operative day was significantly less than that of second post-operative day ($P=0.000$). There was no significant difference in the mean pain according to age ($P=0.81$) or gender ($P=0.5$) (Table No-1).

All patients reported surgical dressing removal as the activity that caused maximum pain. In addition to this, 45

(45%) patients reported that position changing also included pain. None of the patients reported pain during physiotherapy, suctioning or any other activities. Thirty seven (92%) patients required analgesics for reducing the pain while the rest reported the pain was tolerable.

Majority 80 (80%) of patients reported maximum pain on the first postoperative day, while only 20(20%) patients reported maximum pain on second postoperative day. None of them reported maximum pain on third post operative day.⁷

Table 2: T-test showing the association between different degrees of pain and the activities performed

N=100

Sl No.	Degrees of Pain score	Activity Performed	Mean Score	SD	t-value
1	Severe (19)	Surgical dressing removal	7.46	0.36	10.16
2	Moderate (13)	Position changing	7	0	16.17
3	Mild (08)	Other activities	3.64	0.77	12.44
4	Nil (0)	Physiotherapy	4.38	0.63	11.41
5	Nil (0)	Suctioning	6.88	1.99	8.47

Findings reveal that there is significant association between the different degrees of pain and the activities this increases pain after gastrectomy. Hence the hypothesis is accepted.

Table 3: Chi-square value showing association between different degrees of pain and the demographic variables.

N= 100

Demographic Variables	df	Chi-square	Table Value	Remark
Age of the Patients	3	0.30120283	7-81	S
Type of family	3	2.08519128	7-81	S
Education	3	3.84444444	7-81	S
Occupation	2	3.91111111	5-99	S
Family income	3	2.08519128	7.81	S
History of any previous surgery	3	5.58289732	7-81	S
History of any chronic disease	3	5.58289732	7.81	S

Findings reveal that there is significant association between the different degrees of pain and the selected demographic variables. Hence, the Hypothesis is accepted.



CONCLUSION

The reported pain in patients after gastrectomy was mild to moderate and the use of combination drugs like non-narcotic analgesics and NSAIDS provided adequate pain relief. Wong bakers faces pain rating scale could be used as an easy tool to assess the post operative pain. Patient's self report pain along with assessment using the fourth point verbal numerical rating scale was helpful for effective management of pain. The practical knowledge obtained through this study can be used to answer pre-operative queries of patients regarding post operative pain. For most of the patients, pain gradually decreased from first post-operative day to third post operative day.

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