

Comparison between Effect of Conversation and Hand-Holding Alone or with Premedication Midazolam on Preoperative Anxiety

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Abstract

Introduction: Anxiety causing stress is most profound before surgery. Anxiolytics are used routinely to combat perioperative anxiety. Studies have shown that hand-holding and communication are useful in reducing anxiety levels intraoperatively. This study compares the effectiveness of the same with pharmacological interventions in allaying preoperative anxiety.

Materials & Methods: Patients who underwent laparoscopic cholecystectomy or appendectomy under general anaesthesia during 12 months were sought out by a tertiary care centre. Total 100 patients in all were investigated. 50 of them received midazolam, while the other 50 received hand holding and conversation techniques.

Result: The average age of those using midazolam handholding conversation was 61.6 (9), whereas it was 62.16 (23.6) in the other participants group. The reduction of heart rate, mean blood pressure, and APAIS score in participants who got hand holding and conversation with midazolam at demonstrated a statistically significant difference.

Conclusion: For patients undergoing surgery, nursing interventions to lessen anxiety can be beneficial. For patients under local or spinal anaesthesia who are cognizant throughout the procedure, handholding is a noninvasive intervention that is safe, affordable, and simple to carry out. A successful operation depends on the patient's cooperation, and handholding can boost comfort and patient compliance, which will ultimately help the procedure be successful.

Keywords: Anxiety, Handholding, Midazolam

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Introduction

Surgery may be a stressful experience for patients due to the unfamiliar operating room, which raises anxiety levels. [1,2] Pathophysiological reactions including hypertension, dysrhythmias, and a greater need for post-operative analgesia are linked to increased anxiety before surgery, and it may even lead to patients declining elective procedures. Patients feel more at ease after receiving information regarding anaesthesia. [3]

Increased glucocorticoid levels, which suppress the function of natural killer cells and the lymphocyte blastogenesis, may be responsible for the effects of stress on immunological responses. Only the chemotaxis of neutrophils is inhibited by the catecholamines adrenaline and norepinephrine. [4]

For patients, having surgery is always a significant event. Because they are awake during the surgery, patients receiving local anaesthesia may experience more stress than those receiving general anaesthesia. Patients undergoing local anaesthesia for surgery have not, however, received nursing care for psychological comfort throughout the operational period. An adaptive response to the stress of surgery is anxiety. [5] It happens before surgery when the patient is preparing for it or afterward when the patient is dealing with things like pain and discomfort, altered body composition or function, growing dependence, losing control, worries for the patient's family, or probable lifestyle changes. Previous surgical experiences may have a good or negative impact on the patient's degree of anxiety because anxiety is a well-documented motivating factor for many different sorts of behaviour. [6]

Touch is a vital intervention that expresses empathy since it is a nonverbal form of communication. Handholding has a calming impact, lowers anxiety, and gives both parties involved a sense of heightened security.[7] The time and attention being spent with the patient is a key component

of handholding. Holding or touching the hands during painful occurrences allows the nurse to intervene through presence, which calms and relaxes patients' muscles and influences their pulse rates. [8,9]

Psychophysiological reactions of nonprocedural handholding for critically sick patients have been explored as an intervention for anxiety alleviation with conflicting results, and it has been found that individuals with cardiovascular disease benefit from handholding. [10]

Finding the most efficient technique to reduce preoperative patient anxiety is thus necessary. In the current study, the effectiveness of the common pharmacological medicine midazolam and the physical intervention hand-holding with discussion in reducing preoperative anxiety in adult patients undergoing procedures is compared.

Materials & Methods:

This study was conducted among patients who underwent laparoscopic cholecystectomy or appendectomy under general anaesthesia in one of the tertiary care hospital of Gujarat during 1 year. The institutional ethical review board gave the study its approval. Total 100 patients were studied. Among them 50 were given midazolam and 50 were used in hand holding and conservation technique. Inclusion criteria: After obtaining written informed consent, participants between the ages of 18 and 45 and with American Society of Anesthesiologists (ASA) grades 1-2 were enrolled. Patients taking beta-blockers and those suffering from psychiatric illnesses were excluded from the trial. Smokers and those with drug or alcohol addiction were also excluded. The following tools were utilised and validated by the researcher: a) participant demographic information b) ASA grading: 1 and 2 c) APAIS scores: has 6 item questionnaire and each is graded from 0 to 4. [11] d) Physiological parameters:

Noninvasive automated equipment was used to take the patient's HR and MBP readings at the brachial artery in the right upper arm.

The researcher visited the admitted patients the day before surgery to see whether they were eligible to participate in the study. After the study participants were chosen, they received information about the study and how they might participate. Baseline questionnaire was obtained prior going to surgery. The physiological variables, including MBP and HR, were

tracked and recorded. The researcher held the hand of patient during surgery from the time anaesthetic until the procedure was complete. Warm hands were used to touch the hands, and the researcher used medium pressure. Conversation with the patient was in the form of spoken information in their local language regarding the surgical and anaesthesia procedure and the answers to queries regarding the same by a researcher. Endline questionnaire was obtained after surgical procedure.

Result:

Table 1: Demographic profile of participants

Characteristics	Handholding and conservation with midazolam	Handholding and conservations
Age in years	61.6±9	62.16 ± 23.6
Gender – Male	28.3 ± 94.3	16.6± 55.5
Female	21.6±72.16	33.3±122.1
ASA- 1	31.6±105.5	36.6±122.1
2	18.3±61.16	13.3±44.5

Mean age among the participants in handholding conservation with midazolam was 61.6±9 while in another group was 62.16 ± 23.6.

Table: 2 Outcome in pre and post- operative state.

Parameter		handholding and conversation	handholding and conversation with midazolam	P value
Heart rate	Pre-operative	136.16 (26)	141.16(25.3)	<0.05
	Post operative	129.83(19.16)	124.83(22.66)	
Mean Blood Pressure	Pre-operative	161.5(16.5)	165.6(14.5)	
	Post operative	134.66(16.16)	128.3(19.16)	
APAIS	Pre-operative	29(7.16)	27.6(8.16)	
	Post operative	25(6)	15.16(4.5)	

Participants who received hand holding and conservation with midazolam at showed a statistically significant difference in reduction of heart rate, mean blood pressure, and APAIS score.

Discussion:

A key contributor to intraoperative hemodynamic instability and postoperative problems is preoperative anxiety (POC). POC decreases patient satisfaction, just like higher pain, slower recovery, and hospital release. [12,13] Unfortunately,

there aren't many studies on preoperative anxiety therapies. This study looked at the preoperative anxiety levels and examined the role of hand-holding and conversation with a recognised anxiolytic taken alone and in combination. We discovered a technique that successfully reduced the anxiety in all three metrics (HR, MBP and APAIS). Surprisingly, the combo group performed better than the hand-holding group among the groups in terms of anxiety score and HR, despite the MBP.

The results are corroborated by a quasi-experimental study that Pam Morgan conducted in Florida to assess participants' views of intra-operative hand holding during cataract surgery as a means of reducing surgical anxiety. Participants were chosen from a South Eastern state's ambulatory surgery centre. For the experiment, a convenience sample of 30 cataract surgery patients was used. Despite the fact that the majority of patients felt that hand holding helped to reduce their fear, data analysis did not show a statistically significant difference in post-operative anxiety scores between the experimental and control groups. As a result, it was determined that the study did not successfully demonstrate how intraoperative hand holding reduces patients' anxiety during surgery. [14]

According to research by Moon et al., intraoperative hand-holding significantly decreased anxiety in patients undergoing local anaesthesia for cataract surgery. [15] Similar to this, handholding and a patient alert device were contrasted by Mokashi et al. [16] They discovered a noticeable decrease in anxiety in both groups. However, Anuja et al evaluation's. of the same found that hand-holding was not significantly superior. [17] Studies have shown that providing patients with anxiety with multimedia material, discussion, and the chance to ask questions was beneficial. [18] In their review of patients having vertebroplasty, Kim et al. extended this and created three groups: control, hand-holding, and hand-holding while conversing. [19] In our study hand-holding groups performed similar with the Handholding with midazolam group.

It was determined that intra-operative hand holding was effective in lowering systolic blood pressure, diastolic blood pressure, and heart rate of patients undergoing cataract surgery because the RMANOVA for physiological parameters such as systolic blood pressure, diastolic blood pressure, and heart rate shows significant

difference in measurements during the time intervals. However, the RMANOVA analysis of this study's findings did not reveal any differences in the measurement of respiratory rate. Thus, it was determined that hand holding during surgery had no effect on individuals having cataract surgery in terms of lowering their respiration rates. [20,21,22]

Conclusion:

In conjunction with midazolam, the study discovered that holding hands and talking to people significantly lowered anxiety in preoperative settings. Only midazolam as a premedication for anxiolysis is inferior, even though hand-holding and discussion alone are beneficial. Therefore, we advise pairing midazolam with hand-holding and discussion to successfully lower preoperative anxiety. Interventions like intraoperative hand holding, a form of touch therapy, can help patients having cataract surgery feel less anxious. Additionally, it will enable better post-operative patient outcomes and patient compliance during the process. The intraoperative hand holding might be included as part of a powerful drug substitute.

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