

COMPARISON BETWEEN PRE-OPERATIVE AND POST-OPERATIVE ANXIETY IN PATIENTS UNDERGOING GENERAL ANESTHESIA

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ABSTRACT

Objective: To compare the pre and post-operative anxiety and tension in patients awaiting elective cholecystectomies under general anesthesia.

Material and Methods: This study was a prospective study, carried out by a team of anesthetists at Khyber Teaching Hospital Peshawar from March 2011 to December 2011 with assistance from a psychologist. In this study 44 female patients were involved. Institute of Personality and Ability Testing (IPAT) anxiety scale was used for this purpose (the self analysis form, Scheier and Cattel, 1976).

Result: According to the results the anxiety and tensions were relatively more in the post-operative state than the pre-operative period.

Conclusion: Contrary to the normal belief that pre-operative anxiety is more than post-operative anxiety there was an increase in anxiety level after the surgical phase. Hence a pre-operative assessment and counseling of the patient must be undertaken.

Key Words: Pre-operative. Post-operative. Anxiety. General Anesthesia.

INTRODUCTION

Anxiety is a normal emotional response to impending surgery and anesthesia. Anxiety is an umbrella term for physical, mental and behavioral changes which automatically occur in the face of threat. Anxious patient may find it difficult to concentrate on anything other than the threat. Anxiety may be regarded as a problem needing treatment when it is of greater intensity or duration than one would normally expect. If not treated in time, it can lead to impairment or disability in occupational, social or interpersonal functioning.

Individuals with anxiety disorder have specific recurring fears which they recognize as irrational. Anxiety may be connected with a specific unpleasant situation or event. It can also be a product of trauma or prolonged stress. This stress leads to a triggering of a chain reaction in the body, involving different types of hormones specially epinephrine and norepinephrine from the body. Activation of sympathetic nervous system prepares a person for flight or fight by vasodilatation, tachycardia, sweating,

hypertension and hyperglycemia etc. These changes usually have adverse effects on the heart and brain of the patient. Even if the patient is having a stable cardiovascular system these changes may lead to angina but in cardiac compromised patients myocardial infarction can occur.

Pre-operative anxiety and tension is usually due to surroundings of the operation theatre¹. It is more common in the young females, patients undergoing multiple surgeries, extensive surgery like cancer, those patients who had a bad past experience of surgery and anesthesia, patients who are undergoing surgery for the first time and children who fears separation from their parents. Some patients also fear of being awake during general anesthesia and fear of different complications. That is why Pre-operative workup of the patients and the Pre-operative medication are the first steps of anesthesia.

MATERIAL AND METHODS

This study was undertaken at Khyber Teaching Hospital from March 2011 to December 2011 by a team of anesthetists in collaboration with a psychologist. Forty-four female patients were selected for the study with their ages between 30 and 40 years. They belonged to different socio-economic strata's of the society. All the patients were American Society of Anesthesiologist (ASA) class I and class II. The exclusion criteria included patients who were

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undergoing emergency cholecystectomies, psychiatric patients and unmarried patients. Consent was taken from the institution review board of the hospital and the Head of the Surgery Department for the study.

All the patients selected were candidates for elective cholecystectomies. In this cohort study, systematic sampling technique was used, with every 5th qualifying patient included in the cohort. IPAT anxiety² scale was used to measure the anxiety level of the patients. IPAT is an anxiety quantifying scale which was developed for the measurement of anxiety by the extensive research of clinical psychologists. It gives rapid and objective information about anxiety in a standardized manner. It is brief, non stressful and clinically rapid. The test can be easily scored using standardized keys.

IPAT scale is appropriate for age 14 and above. It contains 40 items having three possible alternatives. The subject was required to answer each item by choosing any of the three responses yes, occasionally and no. A high scoring key was used to score the instrument. The patients who participated in the study were asked to fill a questionnaire; the questionnaire was given to the patients before and after, second post operative day of surgery to find out pre and post-operative difference in anxiety levels. Data analysis was performed by SPSS version 20 and charts were made using Microsoft Excel 2007. Data analysis method was matched-pair t-test with variables being pre and post-operative IPAT scores of patient anxiety.

RESULTS

According to the results obtained there was an increased in anxiety level after the surgical procedure (Fig 1), out of 44 patients who filled the questionnaire. The mean anxiety score for the patients before surgery was 6.10 according to the IPAT scale. The post-operative mean score was 7.35 in the same sample of patients (Table 1). Performing the matched pair t-test gave us a significant difference between the pre and post-operative anxiety levels. ($P < 0.05$). The mean difference was found to be 1.25. The standard deviation of difference was found to be 2.75. $P < .05$

DISCUSSION

This is a common belief that pre-operative anxiety is more than the post-operative anxiety^{4,5}. Previous studies show that anxiety causes more suffering to the patient than the operation itself^{6,7}. As discussed above causes of pre-operative anxiety were mainly fears of unknown, separation from family, fear of being awake during anesthesia and stress of anticipated surgical and anesthesiological complications. All these pre-operative tension and fears are mainly psychological.

Table 1: Mean value of Pre-operative and post-operative patients according to the IPAT scale.

Group	N	SD±	Mean
Before surgery	44	7.16	6.10
After surgery	44	4.41	7.35

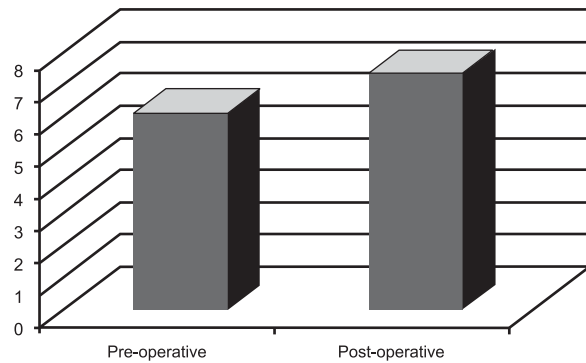


Fig 1: Comparison between Pre-operative and Post-operative anxiety of the subjects

But this study gave us a different perspective, although anxiety existed in both the pre-operative and post-operative states but it was relatively more in the post-operative period. Possible explanation is that the Pre-operative tension is carried on to the post-operative period and is further aggravated by the surgical trauma^{8,9,10}. In the post-operative period when patients were interrogated they were complaining of pain, altered bowel habits, nausea and vomiting. They were unable to mobilize independently; they were feeling exhausted and weak due to loss of blood and due to the effect of anesthetic drugs^{11,12,13}. In addition to these physical problems they were depressed and anxious about their ability to restart their normal household life^{14,15}.

According to the studies done by Johnston et al¹⁰ high pre-operative anxiety leads to a late post-operative recovery, emphasizes not only on the presence of a relation between the two extremes but a need to look into the post-operative states of patients which are conventionally not considered to be damaging to the psychological state of the patient. Studies done by Yin Que et al¹⁷ further the same findings claim. A recent study done on adolescent patients undergoing surgery showed increase pre-operative as well as post-operative anxiety in the patients, the latter being associated with worries of recovery and re-entering their lives again as normal healthy teenagers¹⁸. Yet another study shows increase in post-operative anxiety if the surgery involves opening of body cavity as compared to operation done by endoscopy¹⁹. Study done by Sveinsdóttir et al tested the association of hip and knee replacement surgery with post-operative state,

showing increased depression and anxiety due to fear of permanent disability¹⁸.

CONCLUSION

Pre-operative assessment by an anesthesiologist which includes reassurance through counseling of the patient about the procedure and post-operative implications will effectively solve the post-operative anxiety in the patients.

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