Section: Anesthesia

Original Research Article

A CROSS-SECTIONAL ANALYSIS OF SPECIFIC FEARS AND RISK FACTORS OF PREOPERATIVE ANXIETY IN ADULTS AT A TERTIARY CARE CENTRE

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Abstract

Background: The present study was conducted for evaluating preoperative anxiety among adults of known population. **Materials & Methods:** Adult patients who were scheduled to undergo any kind of surgical procedure under anesthesia were enrolled. All the subjects were given a questionnaire and asked to complete it. The questionnaire used consisted of two sections (A: patient characteristics, B: anxiety). Anxiety questionnaire consisted of validated Amsterdam Preoperative Anxiety and Information Scale (APAIS). Mean intensities of each specific fear were compared between patients with high (APAIS > 10) and low (APAIS < 11) anxiety. All the results were recorded in Microsoft excel sheet and were subjected to statistical analysis using SPSS software. **Results:** Among 300 patients, high anxiety and low anxiety was seen in 80 subjects (26.67 percent) and 120 subjects (40 percent) respectively. Higher age, female gender, illiterate population and negative history of previous surgery were found to be significant factors responsible for high anxiety. In the present study, Anesthesiologist error, not waking up, Awareness during anesthesia, Loss of control, Fatigue and Pain were the significant specific fears associated with anaesthesia. **Conclusion:** The current study highlights the role of specific fear factors and anxiety among patients undergoing surgical procedures. Hence; patient education is necessary and is a part of surgical procedures protocols.

INTRODUCTION

A staggering 243.2 million surgical operations are performed worldwide each year, of which 7 million patients suffer a major complication and 1 million succumb to death.[1] These concerning statistics emphasize the need to become more vigilant and focus on the operative field in order to improve the healthcare outcome. It is without a doubt that the possibility of complications within surgery imparts stress to the patient and ultimately entails a traumatic situation.[2] Preoperative anxiety, feelings of discomfort and tension, along with other physical and autonomic symptoms, therefore results before surgery.[3-5] Age is a protective factor of preoperative anxiety as each 1 year increase in age reduces five percent of the chance of preoperative anxiety. Females are at higher risk and levels of anxiety than men and educated persons experience higher levels of anxiety.[5-8] Married patients have greater emotional supports, so they experience lower anxiety levels. The significance of the surgery is associated with anxiety as higher levels of anxiety are reported in patients who had a greater surgical procedure. The history of cancer is an important risk factor for preoperative anxiety. Previous psychiatric diseases, such as depression and anxiety may influence the extent of preoperative anxiety.[8-10] Hence; the present study was conducted for evaluating preoperative anxiety among adults of known population.

MATERIALS AND METHODS

The present study was conducted for evaluating preoperative anxiety among adults of known population. Adult patients who were scheduled to undergo any kind of surgical procedure under anesthesia were enrolled. All the subjects were given a questionnaire and asked to complete it. The

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questionnaire used consisted of two sections (A: patient characteristics, B: anxiety) as used in a previous study.[10] Anxiety questionnaire consisted of validated Amsterdam Preoperative Anxiety and Information Scale (APAIS). It also consisted of anxiety about painful measures, loss of control, waking up during surgery / intraoperative awareness, anesthesiologist error, not waking up / death under anesthesia, postoperative nausea and vomiting, fatigue and drowsiness, and permanent impairment of personality. Patients were asked to rate their anxieties using the mNRS that ranges from 0 (no anxiety) to 10 (extreme anxiety). Mean intensities of each specific fear were compared between patients with high (APAIS > 10) and low (APAIS < 11) anxiety.10 All the results were recorded in Microsoft excel sheet and was subjected to statistical analysis using SPSS software.

RESULTS

A total of 300 patients were analyzed. Mean age of the subjects was 51.2 years. Among them, high anxiety and low anxiety was seen in 80 subjects (26.67 percent) and 120 subjects (40 percent) respectively. Higher age, female gender, illiterate population and negative history of previous surgery were found to be significant factors responsible for high anxiety. In the present study, Anesthesiologist error, not waking up, Awareness during anesthesia, Loss of control, Fatigue and Pain were the significant specific fears associated with anaesthesia.

Table 1: Anxiety comparison

Variable		High anxiety (n=80)	Low anxiety (n=120)	p-value
Mean age (years)		53.9	48.1	0.001 (Significant)
Gender	**Males**	37	75	0.000 (Significant)
	Females	43	35	
Education	**Illiterate**	53	33	0.002 (Significant)
	Upto secondary	18	46	
	More than secondary	9	41	
History of previous surgery	**Yes**	29	83	0.000 (Significant)
	No	51	37	

Table 2: Factors for specific fears

Variable	r-value	p-value
Anesthesiologist error	0.215	0.002 (Significant)
Not waking up	0.995	0.000 (Significant)
Awareness during anesthesia	0.217	0.000 (Significant)
Loss of control	0.546	0.001 (Significant)
Fatigue	0.712	0.000 (Significant)
Pain	1.335	0.000 (Significant)

DISCUSSION

Approximately 60% of patients experience a significant degree of anxiety prior to surgery. Moreover, preoperative patient anxiety significantly predicts anesthetic consumption and postoperative pain intensity. Therefore, identifying the best strategies to reduce preoperative anxiety may contribute to improving intraoperative and postoperative outcomes. Notably, patient anxiety is not routinely assessed by surgeons, who often hold anesthesiologists responsible.[7-10]

A total of 300 patients were analyzed. Mean age of the subjects was 51.2 years. Among them, high anxiety and low anxiety was seen in 80 subjects (26.67 percent) and 120 subjects (40 percent) respectively. Higher age, female gender, illiterate population and negative history of previous surgery were found to be significant factors responsible for high anxiety. Eberhart L et al in a previous study, identified independent predictors of these three anxieties dimensions and quantified the relevance of specific fears particularly associated with anesthesia. 3087 of the 3200 enrolled patients were analyzed. Mean (SD) total preoperative anxiety (APAIS-A-T, range 4–20) was 9.9 (3.6). High anxiety (APAIS-A-T > 10) was reported by 40.5% of subjects. Mean (SD) levels of concern regarding the eight studied specific fears ranged from 3.9 (3.08) concerning "Anesthesiologist error" to 2.4 (2.29) concerning "Fatigue and drowsiness" with an average of 3.2 (2.84) concerning all specific fears. Ranking of all specific fears according to mean mNRS scores was almost identical in patients with high versus those with low anxiety. Among nine independent predictors of anxiety, only 3 variables (female gender, negative and positive anesthetic experience) independently predicted all three APAIS anxiety subscales. Other variables had a selective impact on one or two APAIS anxiety subscales only. Female gender had the strongest impact on all three APAIS anxiety subscales. Adjusted r2 values of the three models were all below 13%. The high variability of importance assigned to all specific fears suggests an individualized approach is advisable when support of anxious patients is intended.[10]

In the present study, Anesthesiologist error, not waking up, Awareness during anesthesia, Loss of control, Fatigue and Pain were the significant specific fears associated with anaesthesia. Interview and communication strategies are considered the

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most common strategy used by anesthesiologists for controlling preoperative anxiety in some studies. Different studies have evaluated the efficacy of these strategies in reducing preoperative anxiety. A report evaluating 230 patients undergoing breast and abdominal surgeries by State-Trait Anxiety Inventory (STAI) regarding their preoperative anxiety showed that surgeon communication with the patients and their communication abilities was associated with reduced anxiety scale. They have used predefined question prompt lists for the consultation session held 1-3 weeks before the surgical schedule. Another study on a structured communication between patients and anesthesiologists showed reduced anxiety and fear of anesthesia, particularly in younger patients compared to standard interview techniques.[11,12] Bedaso A et al, in a previous study, investigated the prevalence of preoperative anxiety and its predictors among adult patients scheduled for elective surgery. State and trait anxiety inventory (STAI) measurement scale was used to assess preoperative anxiety. Among a total of 402 patients enrolled in the study 228 (56.7%) were male. The prevalence of preoperative anxiety among scheduled patients for elective surgery was 47.0%. Having strong social support (AOR = .16 CI = 0.07, 0.34), harm from doctor or nurse mistake (AOR = 5.03, CI = 2.85, 8.89), unexpected result of operation (AOR = 3.03, CI = 1.73, 5.19), unable to recover (AOR = 2.96, CI = 1.18, 4.87), and need of blood transfusion (AOR = 2.76, CI = 1.65, 4.62) were significantly associated with preoperative anxiety. The prevalence of preoperative anxiety was high (47%). Having strong social support, unexpected result of operation, harm from doctor or nurse mistake, need of blood.[13]

CONCLUSION

The current study highlights the role of specific fear factors and anxiety among patients undergoing surgical procedures. Hence; patient education is necessary and is a part of surgical procedures protocols.

REFERENCES

1. Munafò MR, Stevenson J. Anxiety and surgical recovery: reinterpreting the literature. J Psychosom Res. (2001) 51:589–96.
2. Kain ZN, Maranets I. Preoperative anxiety and intraoperative anesthetic requirements. Anesth Analg. (2000) 91:250.
3. Weissman C. The metabolic response to stressan overview and update. Anesthesiology. (1990) 73:308–27.
4. Arch JJ, Craske MG. First-line treatment: a critical appraisal of cognitive behavioral therapy developments and alternatives. Psychiatric Clinics. (2009) 32:525–47.
5. Klein DF. Flawed meta-analyses comparing psychotherapy with pharmacotherapy. Am J Psychiatry. (2000) 157:1204–11.
6. Kaczkurkin AN, Foa EB. Cognitive-behavioral therapy for anxiety disorders: an update on the empirical evidence. Dialogues Clin Neurosci. (2015) 17:337.
7. Wright KD, Stewart SH, Finley GA, Buffett-Jerrott SE. Prevention and intervention strategies to alleviate preoperative anxiety in children: a critical review. Behav Modif. (2007) 31:52–79.
8. Dao TK, Youssef NA, Armsworth M, Wear E, Papathopoulos KN, Gopaldas R. Randomized controlled trial of brief cognitive behavioral intervention for depression and anxiety symptoms preoperatively in patients undergoing coronary artery bypass graft surgery. J Thorac Cardiovasc Surg. (2011) 142: e109–15.
9. John M. Managing anxiety in the elective surgical patient. Br J Nurs. (2009) 18:416–9.
10. Eberhart L, Aust H et al. Preoperative anxiety in adults - A crosssectional study on specific fears and risk factors. BMC Psychiatry. 2020; 20: 140
11. Lim L, Chow P, Wong C-Y, Chung A, Chan Y-H, Wong W-K, et al.. Doctor–patient communication, knowledge, and question prompt lists in reducing preoperative anxiety–a randomized control study. Asian J Surg. (2011) 34:175–80.
12. Jadin SMMF. Effect of structured pre-anesthetic communication on preoperative patient anxiety. Medizinische Fakultät der Universität Basel. (2018) 8:1–5.
13. Bedaso A, Ayalew M. Preoperative anxiety among adult patients undergoing elective surgery: a prospective survey at a general hospital in Ethiopia. Patient Saf Surg. 2019; 13:18.

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