



PREOPERATIVE ANXIETY: MODE OF ANESTHESIA AND GENDER PERSPECTIVE

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ABSTRACT

Aims: The aim of present study was to investigate the preoperative anxiety and its association with gender and mode of anesthesia.

Materials and Methods: This cross sectional, observational study consisted of 64 patients admitted to surgical ward for any planned operative procedure. Consenting patients provided their sociodemographic information and anxiety subscale of Hospital Anxiety and Depression Scale (HADS) was applied.

Results: The mean anxiety scores of the total sample was found to be 11.45, and mean scores 9.66 ± 2.26 and 13.75 ± 3.52 respectively for males and females; p value = 0.000.

Conclusions: Preoperative anxiety is found to be high and it was not different in types of anesthesia planned, but significantly higher among females patients.

KEYWORDS

Preoperative, Anxiety, Anesthesia, Gender.

INTRODUCTION

Undergoing any surgical procedure may be a very stressful event and anxiety as described as a vague, uneasy feeling is common for preoperative period. [1]

Preoperative anxiety may be attributable to patient being concerned about a disease, hospitalization, anesthesia and surgery, or the unknown [2]. Anxious patients require higher doses of anaesthetic induction agents and postoperative analgesic drug [3,4]. Managing anxiety in preoperative period is important as it induces autonomic system instability and may precipitate ventricular ectopic beats or in extreme circumstances ventricular fibrillation [5]. Greater distress or anxiety prior to surgery is associated with a slower and more complicated postoperative recovery [6]. The incidence of preoperative anxiety has been estimated to vary from 11 to 80% in the adult [4].

The aim of this study was to determine the gender difference in preoperative anxiety and to find difference if surgery is planned under general anesthesia or local or spinal anesthesia.

MATERIALS AND METHOD

The aim of the present study was to assess for pre operative anxiety and to assess any difference between gender and between subgroups of patients undergoing general anesthesia or not. This study was conducted at surgical wards of a tertiary care medical college hospital, RIMS Ranchi, Jharkhand, India. The study protocol was approved by the institutional review board of RIMS, Ranchi. It was a cross-sectional study carried out over a six month period (March 2016- August 2016). All adult elective surgical patients who satisfied the inclusion criteria for the study and consented were recruited. All recruited patients were requested to complete a questionnaire about their socio-demographic data sheet and thereafter anxiety subset of Hospital Anxiety and Depression Scale (HADS) was applied.

Subjects

Subject patients were included from both sexes within age group 18 to 65 years, who were admitted in surgical wards for any elective planned surgery. No diagnostic entity was excluded and all

emergency surgical indications were excluded. These patients were examined clinically after taking detailed history about the illness and their sociodemographic variables.

Tools

Socio-demographic Data Sheet: The socio demographic data sheet included age and gender of the patients, it also recorded clinical information like whether selected for general anesthesia or spinal or local anesthesia.

Hospital Anxiety and Depression Scale (HADS) [7]: this is very well validated scale to assess anxiety and depression among hospitalized patients. It consists 14 questions, 7 scoring anxiety and 7 scoring depression. We omitted those questions relating to depression. Patients were asked to read each question and place a tick against the reply that came closest to how they had been feeling that day. Each answer was scored 0, 1, 2 or 3. The possible range of scores was therefore 0 to 21, with higher scores indicating greater levels of anxiety. Score of 0-7 is considered normal, scores of 8-10 is borderline abnormal and scores of 11-21 is abnormal case.

Procedure: It was a cross sectional observational study. All subjects were assessed for inclusion – exclusion criteria, and on qualification they were requested to fill up Socio-demographic data sheet or asked verbally and filled up by investigators. The anxiety subset of HADS was applied on all subjects and recorded. It was done before pre-anaesthetic assessment on the evening before elective planned surgery.

Statistical Analysis: The collected data of all students was statistically analyzed, using Statistical Package for Social Sciences (SPSS, Inc., Chicago, Illinois) version 10.0.

Data analysis included means and standard deviations for each gender, and clinical subgroup of the sample. The parametric t-test was used to determine if differences existed between the groups. Statistically significant levels are reported for p values less than or equal to 0.05. Highly significant levels are p values less than .001.

RESULTS

A total of 64 patients (56.2% male and 43.8% female) were included for the study, Table 1 summarizes the sample characteristics. The mean age of the complete sample was 44.93 years (44.68±8.98 for Planned for GA group and 45.24 ± 7.52 years for Planned for LA or Spinal group). the age of these two groups were statistically similar in context of mean age.

The mean anxiety scores of the total sample was found to be 11.45, this suggests high abnormal anxiety of the whole sample, however there was no significant group difference among patients of planned for GA and patients with planned local or spinal anesthesia, and the mean was 11.80 ± 3.60 and 11.03 ± 3.41 respectively for these two groups. (table – 2) However, when mean anxiety scores were assessed across gender there was significantly higher anxiety among females in comparison to males (mean scores 9.66 ± 2.26 and 13.75 ± 3.52 respectively for males and females; p value =0.000) (table -3).

DISCUSSION

Preoperative anxiety is a complex subjective response influenced by many factors including the patient’s temperament, and his or her understanding or lack of understanding of their illness and the proposed surgery. Patients awaiting surgical procedures have various reasons for their preoperative anxiety [2]. Pre-operative anxiety may be objectively evaluated by different methods. and hospital anxiety and depression scale (HADS)’’ is among one of them [8]. This was used in this study because it is a simple, short, quick and easy test to explain to the patient as well as reliable for measurement of anxiety [9].

We found an expected significantly high anxiety among preoperative patients, as the mean anxiety score was found to be 11.45, this is much above the normal range of 0-7 and 8-10 Borderline abnormal anxiety cases. In fact there were only 7 patients who scored below 7 cut off score, and 27 patients scored below 10 and 37 patients above 10. This reveals very high level of anxiety preoperatively, which may be needed to addressed adequately.

There may be various reasons attributable for this high anxiety, including fear of uncertainty, fear of death or disability (10), fear of harmful mistakes being made during the surgical procedure and possibility of having the surgical operation postponed (11). Better doctor patient communication which involves information sharing about the surgical procedure, patient satisfaction, attention to queries by the patient and trust in the physician has been associated with lower anxiety levels (12,13).

Ours study affirms that anxiety is independent of the fact, whether patient is undergoing for surgical procedure under general anesthesia or local anesthesia. Also preoperative anxiety is a psychological construct that significantly influenced by gender. Gender-based differences may emanate from a biomedical (genetic, hormonal, anatomical, physiological, pharmacokinetic); psychosocial (personality, coping, symptom reporting, Stereotypic and gender roles, Impact of sexist events, Social contraction of symptom, Power issues, Life style); epidemiological (population-based risk factors). Rarely does biology act alone to determine health inequities. Social determinants, including gender, interact with each other and exacerbate biological vulnerabilities [14].

CONCLUSION

The finding of preoperative anxiety in this study, with the anxiety subscale of HADS is very high and it was not different in types of anesthesia planned, but there is significantly high preoperative anxiety among females as compared to male patients.

Table 1. Age and sex distribution of the sample according to grouped as planned for GA and planned for LA or spinal.

| Variable | Planned for GA (n=35) | Planned for LA or Spinal (n = 29) | t / Chi Square | df | p |
|-------------|-----------------------|-----------------------------------|----------------|----|------|
| Age (Years) | 44.68± 8.98 | 45.24± 7.52 | -2.65 | 62 | .792 |

| Sex | Male (n) | 21 | 15 | .441 | 1 | .61 |
|-----|------------|----|----|------|---|-----|
| | Female (n) | 14 | 14 | | | |

Table 2. Comparison of mean Anxiety scores according to grouped as planned for GA and planned for LA or spinal.

| | Planned for GA (n=35) | Planned for LA or Spinal (n = 29) | t | df | Sig. (2-tailed) |
|---------------------|-----------------------|-----------------------------------|-------|----|-----------------|
| Mean Anxiety scores | 11.80 ± 3.60 | 11.03 ± 3.41 | 0.866 | 62 | .390 |

Table 3. Gender difference in mean Anxiety scores of HADS Anxiety subscale.

| | Males (n=36) | Females (n = 28) | t | df | Sig. (2-tailed) |
|----------------------------|--------------|------------------|--------|----|-----------------|
| mean HADS Anxiety subscale | 9.66 ± 2.26 | 13.75 ± 3.52 | -5.621 | 62 | .000* |

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