

## Effect of Preanesthetic Assessment in Outpatient Consultation Clinic in Decreasing Anxiety of Patient Undergoing Elective Surgery

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**Abstract:** Surgeries are seen as stressors that trigger preoperative anxiety. Preparing patients for surgery through preoperative information becomes crucial to allay anxiety. **Methods:** The study was done in 60 adult patients ASA grade I/II undergoing various elective surgery. Patient was asked a single question "Are you anxious?" If yes, the degree of anxiety was measured using VAS scale. Patients were given One to one instruction & information regarding details of surgical procedures, anesthesia procedure and operation theater environment. Patients were again asked to mark the line on VAS scale Difference in their anxiety level before and after consultation noted. Specific anxieties were also noted. **Results:** The mean score of VAS for surgery was 30.83±16.9 and for anesthesia was 24.67 ±14.9. Patients feared surgery significantly more than anesthesia ( $p < 0.05$ ). Total VAS (S+A) Pre PAC was 55.50± 23.46 and Post PAC 21.50 ± 12.87 which was statistically very significant ( $p$  value 0.0001). **Conclusion:** Our study shows that the VAS is a useful tool to predict pre-operative anxiety. Pre-anesthetic assessment in Outpatient pre anesthetic Consultation Clinic significantly reduces pre-operative anxiety in patients undergoing elective surgery.

**Keywords:** Anxiety, Elective surgery, pre- anesthetic assessment, Pre-operative information, VAS.

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### I. Introduction

Preoperative anxiety is a challenging concept in the preoperative care of patients. Most patients awaiting elective surgery experience preoperative anxiety. Anxiety is described as an unpleasant emotion and may cause patient to avoid a planned operation. It may be associated with abnormal hemodynamics as consequences of sympathetic, parasympathetic and endocrine stimulation. Besides, preoperative anxieties have profound effect on the immune system and on development of infections. Interventions to reduce preoperative anxiety include Provision of information, Pharmacological therapy and relaxation techniques.

One of the aims of Pre anesthetic assessment is to reduce fear and anxiety. Although in spite of that our patients have high level of anxiety. It was so because only the clinical status of patients and their fitness in relation to anesthesia were assessed and nothing was done to reduce anxiety about surgery and anesthesia.

Preanesthetic assessment in an outpatient consultation clinic has been developed recently<sup>1,2</sup> Preanesthetic assessment in an outpatient consultation clinic allows the patient to be assessed in a quiet and relaxed atmosphere. In this way more detailed information can be presented in an easily understood manner and in location away from the threatening environment of a large hospital ward, thus allowing a higher patient satisfaction.

### II. Aims of study:

The present study was carried out firstly, to find out the degree of anxiety using VAS scale and secondly to find out the effect of Preanesthetic consultation in an outpatient consultation clinic in decreasing anxiety of patients undergoing elective surgery.

### III. Inclusion criteria:

Adult patients between 18- 65 yrs. of age, ASA I/II who were undergoing elective surgery and willing to participate in the study were included. All unconscious patients, patients with psychiatric disorders or on psychoactive drugs were excluded.

### IV. Material and methods:

After obtaining informed consent, the study was done in sixty adult patients ASA grade I/II undergoing various elective surgery in a medical college teaching hospital.

In Outpatient Preanesthetic Consultation Clinic, Patient was asked a single question "Are you anxious?" If yes, the degree of anxiety was measured using VAS scale. The VAS was based on a 100 mm scale;

the extreme left side indicated zero anxiety and the extreme right, maximal anxiety. Patients were given One to one instruction & information regarding details of surgical procedures, anesthesia procedure and operation theater environment. After that patients were asked about their queries and answered upto their satisfaction. Patients were again asked to mark the line on VAS scale to indicate the degree of their anxiety. Difference in their anxiety level before and after Preanesthetic consultation noted. Specific anxieties were also noted. Data are expressed as mean  $\pm$  SD and Student t test was used to determine differences in VAS scores before and after consultation. A  $P < 0.05$  was considered as statistically significant.

## V. Results:

Sixty adult patients (24 males and 36 females) undergoing various elective surgery were interviewed. The demographic data of all patients are shown in Table 1.

The VAS score was noted for surgery and anesthesia before and after preanesthetic consultation as shown in Table 2. The mean score of VAS for surgery was  $30.83 \pm 16.9$  and for anesthesia was  $24.67 \pm 14.9$ . Patients feared surgery significantly more than anesthesia as shown in Fig.1 ( $p < 0.05$ ). After consultation again VAS score was noted.

Total VAS (S+A) Pre PAC (Before Preanesthetic consultation) was  $55.50 \pm 23.46$  and Post PAC (After Preanesthetic consultation)  $21.50 \pm 12.87$  (Table 2) which was statistically very significant ( $p$  value 0.0001) Preoperative anxiety was reduced by preanesthetic assessment in outpatient consultation clinic as shown in Fig 2.

Patients (58%) thought that their anxiety would be less if they were provided with detailed information regarding the operation and anesthesia. Females had significant higher level of anxiety as compared to males. Observing different factors responsible for pre-operative anxiety showed that the most common factors were concern about family followed by results of operation, Spinal prick/ Backache and post operative pain/ vomiting. Only 8 (13.3%) patients were anxious because of anesthesia complication/ awareness during surgery.

## VI. Discussion:

For many patients surgery is a life event of dramatic significance, which disrupts their personal, professional, and economic lives, besides having physical effects. Anxiety measurement is necessary in the preoperative period. It allows detection of patients with high anxiety, encouraging appropriate steps to ameliorate this.

Preoperative period is the time when most patients experience significant fear regarding surgery, complications and level of recovery. The patient enters in the Outpatient Pre anesthetic Consultation Clinic with fear and anxiety. Excessive preoperative anxiety can lead to pathophysiological responses: Tachycardia, hypertension, arrhythmia and higher levels of pain that may persist into the postoperative period. The more informed and better prepared patients are about what to expect during the surgical experience, the less anxious they tend to be.

Anxiety is a complex process. The most commonly used instrument is the Spielberger's State Trait Inventory (STAI)<sup>(3,4)</sup>. The STAI questionnaire is a global test but is time consuming, difficult to complete and often requires the help of psychologist. For this reason we chose Visual analogue Score (VAS) which was easy to complete and reliable. The Visual analogue scale (VAS) is a useful and valid method for measuring preoperative anxiety and compares well with the state anxiety score of the STAI<sup>5</sup>.

Anesthetic assessment in an outpatient consultation clinic reduces preoperative anxiety<sup>6</sup>. Our patients experience very high levels of preoperative anxiety. Patients reported a preoperative anxiety score of 30.83 millimeter (mm) for surgery and 24.67 mm for anesthesia by VAS. Patients feared surgery significantly more than anesthesia. Kindler et al<sup>7</sup> study showed that most of the patients awaiting elective surgery experienced high levels of preoperative anxiety. Patients feared surgery significantly more than anesthesia.

Our study observed significantly higher levels of anxiety in females. Similar finding have also been reported in the literature<sup>8</sup> while some other investigators demonstrated the lack of gender effect<sup>9</sup>

After Preanesthetic assessment in Outpatient Consultation Clinic there was marked difference in their anxiety level. The Pre PAC VAS ( $55.50 \pm 23.46$ ) was reduced to  $21.50 \pm 12.87$  ( $p$  value 0.0001) which was statistically very significant. This shows significant reduction in Preoperative anxiety by preanesthetic assessment in outpatient consultation clinic. In a study conducted in the United States, anxiety in the preoperative period was reduced by information about procedures<sup>10</sup>.

Kiyohara et al<sup>11</sup> showed that patients, who have information regarding the surgical procedure they will undergo, have lower anxiety levels.

One important finding observed during the study is that some patients score their anxiety to be 0 while some patients are at the other extreme at 100. The patient who scored 0 stated that they have faith in God, and they were absolutely not worried about surgery or anesthesia. This is an extremely important finding. Those who were extremely anxious were so because after being scheduled for elective surgery, the patients were

neither fully aware of the peri-operative surroundings nor were they properly informed, which is the case in our setup.

### VII. Figures and Tables

Table 1: Demographic data

Variable	Value
Age (mean ± SD)	39.12 ± 12.3
Gender (M:F)	24/36
ASA status (I/II)	32/28
Previous surgery (yes/no)	12/48

Table 2: Anxiety score (VAS) for surgery and anesthesia

VAS	Mean	SD
Surgery Pre PAC	30.83	16.90
Anesthesia Pre PAC	24.67	14.90
Total VAS (S+A) Pre PAC	55.50	23.46
Total VAS (S+A) Post PAC	21.50	12.87

Fig.1 Mean VAS Anxiety score for surgery and anesthesia

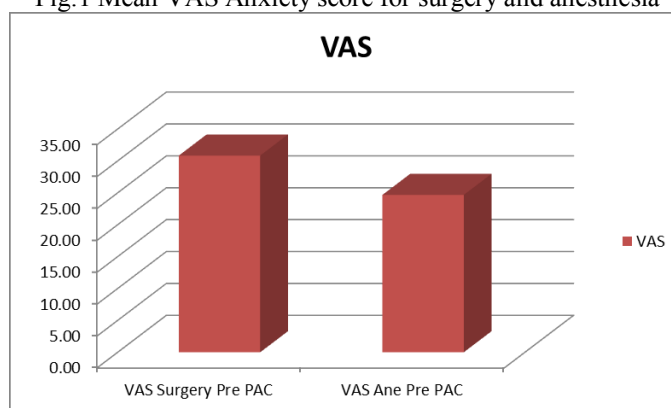
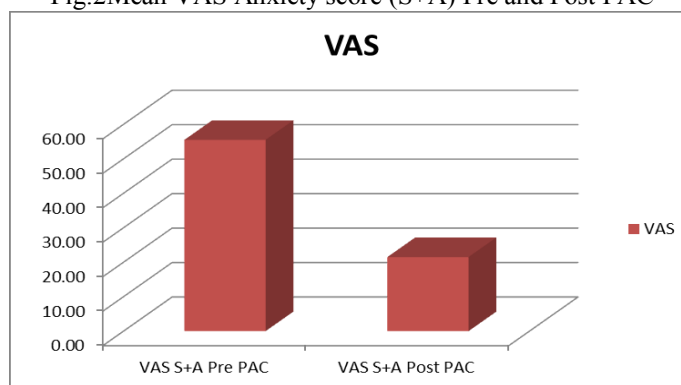


Fig.2 Mean VAS Anxiety score (S+A) Pre and Post PAC



### VIII. Conclusion

Our study shows that the VAS is a useful tool to predict preoperative anxiety. Our patients experience very high levels of preoperative anxiety and no steps were taken to reduce this. Therefore, we should follow the practice of explaining the diagnosis and surgery to be performed by the surgeon at the time of admission. This should be supplemented by proper preanesthetic assessment in Outpatient Pre anesthetic Consultation Clinic, which includes explaining all the details regarding of surgical procedures, anesthesia procedure and operation theater environment to reduce preoperative anxiety in patients undergoing elective surgery.

### References

- [1]. Finegan BA. Preadmission and outpatient consultation clinics (Editorial) *Can J Anesth* 1992; 39:1009-11
- [2]. Fischer SP. Development and effectiveness of an anesthesia preoperative evaluation clinician a teaching hospital. *Anesthesiology* 1996; 85: 407-10
- [3]. Norris w, Baird WLM. Pre-operative anxiety – a study of the incidence and aetiology. *Br J Anesth* 1967; 39: 503-9
- [4]. Jhonson M. Anxiety in surgical patients. *Psychol Med* 1980; 10:145-52
- [5]. Christoph H Kindler et al. The visual analogue score allows effective measurement of pre-operative anxiety. *Anesth Analg* 2000; 90:706-12
- [6]. Anesthetic assessment in an outpatient clinic reduces preoperative anxiety. *Can J Anesth* 2000/ 47: 511-15
- [7]. Kindler CH, Harms C, Amsler F, Scholl T, Scheidegger D. The Visual Analog Scale allows effective measurement of preoperative anxiety and detection of patients' anesthetic concerns. *Anesth Analg* 2000; 90: 706-712.
- [8]. da Conceicao DB, Schonhorst L, da Conceicao MJ, Filho GRO. Heart rate and blood pressure are not good parameters to evaluate preoperative anxiety. *Rev Bras Anesthesiol* 2004; 54: 769-773.
- [9]. Boker A, Brownell L, Donen N. The Amsterdam preoperative anxiety and information scale provides a simple and reliable measure of preoperative anxiety. *Can J Anaesth* 2002; 49: 792-798.
- [10]. Bondy LR, Sims N, Schroeder DR. The effect of anesthetic patient education on pre-operative patient anxiety. *Reg Anest Pain Med* 1999; 24: 158-164.
- [11]. Kiyohara LY, Kayano LK, Wliveira LM, Yamamoto MU, Inagaki MM, Ogawa NY, et al. Surgery information reduces anxiety in the pre-operative period. *Rev Hosp Clin Fac Med S Paulo* 2004; 59: 51-56.