Anesthesiologist’s Role in Relieving Patient’s Anxiety

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Abstract

Introduction: Anesthesia and surgery have proved to be highly anxiety provoking and with the rise of elective surgery, its aspect of patient’s experience has become prominent in time. However, our fault as anesthesiologists is that we have not made people get versed with what we people as anesthesiologist do in the operating room. Hence, keeping in view all this, a study was carried out, in which video information/images regarding anesthesia and surgical procedure was shown to patients on PowerPoint Presentation. Different images showing previous patient’s hospital journey were shown to educate patients. Methods: Two hundred patients scheduled to undergo elective surgery were taken and were divided into two groups of 100 each. Patients (study group or Group I) were shown video clippings/images of other previously operated patients and their hospital journey including surgery and anesthesia for which patient came in hospital. The study was carried out on the patient in each group while Group II was treated in normal way and not shown any type of images/videos. Hamilton Anxiety Rating Scale was used as a criterion to measure the level of anxiety in Group I and II at four different intervals that are before pre anesthetic check up (PAC), after showing videos and images in Group I, 1 h before surgery and 8 h after surgery. Statistical Analysis: The results of observation of both the groups at different intervals time were statistically compared and analyzed. These characteristics were analyzed using the “Chi-square tests” and “unpaired t-test.” Results: Video and images information if done preoperatively have been shown to reduce patient’s anxiety, although little is known regarding the effects of the method. Conclusion: Showing videos/images of hospital journey for educating the patients before the operation is beneficial to patients undergoing elective surgery.

Keywords: Anesthesia, Hamilton Anxiety Rating Scale, PowerPoint Presentations, preanesthetic check up

INTRODUCTION

Having surgery is a stressful event in patient’s life. Preoperative anxiety is inevitable though it may be variable in different patients. Even a newborn is not free from anxiety. Anxiety is common preoperatively and to reduce it different pharmacological interventions are done including the use of narcotics, hypnotics, sedatives, and anxiolytics, etc., which are not usually free from their side effects. Sometimes, patients use these drugs postoperatively and they become habit forming or lead to other cognitive dysfunctions. Anesthesiologists have variable perception of patient’s anxiety. Anxiety is one of the causes of anxiety; other causes are surgical technique, success of operation, fear of anticipated complications, and amount of information provided to patients. Fear of death is a major anxiety factor in patients undergoing surgery. Most of the patients are unaware of what is happening in the operating room. No doubt that the Internet has brought revolutionary changes in our personal life, but ours being a developing country, still population living in far flung areas do not have any access to multimedia to become aware about surgical and anesthesia procedures. Even it will be true to say that large population of our country does not know anything about anesthesia and they still have misconceptions about anesthesia that anesthesia is what they are given to smell or forced to smell and an injection given on the back for certain surgical procedures. And fear...
of reversal from anesthesia remains one of the major anxiety factors in their minds. This research topic of our discussion deals with studying the anxiety levels of patients coming for different types of surgeries and Anesthesiologists addressing patient’s concerns preoperatively improves patient’s confidence. This research paper is a sort of study carried out to uncover the most anxiety provoking aspects of surgery and anesthesia and to determine what interventions may help alleviate such anxiety. In this study, we investigated anxiety level arising from the experience of the clinical environment during surgery and anesthesia and second to cover the specific aspects, which patient’s find anxiety provoking and dissuade them from opting anesthesia.

**Review of literature**
Anesthesia has proved to be highly anxiety provoking. With the rise of elective surgery, this aspect of patient’s experience has become a prominent issue. Indeed with brief hospital stay, limited contact with health-care professionals, restricted formal anxiety management, and acute psychological impact of day surgery. Increasing causes of anxiety among patients of different age and gender are also related with unfamiliar environment of the hospital.

Anxiety is very common preoperatively with the prevalence of up to 80%. Common causes of patient’s anxiety are fear of surgery, anesthesia, and complications (e.g., pain and nausea), previous unpleasant experience of anesthetics or surgery or a predisposing personality. Previous “good” experience (of anesthetics or surgery) invariably mean an more relaxed patient. Patient’s expectations of the staff behavior toward them are another important factor that may affect their anxiety and overall hospital experience. If patients are unduly anxious and apprehensive about the operation, their physiological recovery, well-being, and overall experience may be negatively affected. Many studies have investigated different interventions and their effect on patient’s anxiety. These interventions include pharmacological anxiolytics, distraction therapy, and provision of information. We the anesthesiologists are frequently inaccurate in assessing patient’s anxiety and usually underestimate due to different level of judgment of different anesthesiologists for which visual analog scale is recommended by many anesthesiologists. Nurses also inaccurately assess patient’s anxiety, the most common inaccuracy being overestimation. However, some anesthesiologists using their clinical judgment were found to accurately predict patient’s anxiety. The Hamilton Anxiety Rating Scale (HAM-A) has been used by Maier et al. and Borkovec and Costello. In this study, we also used HAM-A and tried to identify the causes of anxiety and interventions done to alleviate it with respect to patients in the Indian scenario.

**Aim of study**
Primary aim was to:
- Investigate the level of anxiety due to anesthesia and/or surgical intervention
- Various techniques and methods adopted to alleviate patient’s anxiety in such stressful conditions.

Our secondary aim was to assess patient’s satisfaction level after adopting various methods of alleviating anxiety.

**Methods**
As part of larger study investigating causes of anxiety in patient undergoing surgery in the American Society of Anesthesiologists physical status Class I and II in one of the Government Medical College in India, and its associated hospitals. Proper written informed consent from each patient was taken on consent pro forma. Two hundred patients scheduled to undergo elective surgery were taken and were divided into two groups of 100 each. Patients (study group or Group I) were shown video clippings/images of other previously operated patient’s hospital journey including surgery and anesthesia for which patient came in hospital. The study was carried out on the patient in each group while Group II was not shown any videos or images. HAM-A was used as a criterion to measure the level of anxiety in Group I and II at four different intervals that are before PAC, after showing videos/images in Group I, 1 h before surgery and 8 h after surgery. HAM-A score was recorded on the pro forma for each patient before showing videos/images and PAC in both the groups. Again in Group I, HAM-A score was recorded after showing videos/images and during PAC, 1 h before surgery and 8 h after surgery while no any video presentation/images were shown in Group II. HAM-A score was taken during PAC, then again at 1 h before surgery and 8 h before surgery. While showing videos/images, other material used was laptop, screen, and projector. The results of our observation in both the groups were statistically analyzed and compared. Statistical analysis was performed using “unpaired t-test” for parametric data whereas for nonparametric data “Chi-square test” was used. $P < 0.001$ was considered statistically highly significant.

**Results and Discussion**
Taking a clue from Badner et al. and Jiala et al., this study was undertaken in every type of surgeries under regional anesthesia. Hu et al. concluded that reliable estimation of anxiety is best sourced from the patient. Interestingly, anesthesiologists feel that too little or too much information can increase patient’s anxiety score than what appropriate information should be given to patient without increasing the anxiety. Usually, patients are concerned about the anticipated anesthetic complications, surgical techniques, success of operation, fear of being unconscious, pain and weakness in any part of the body postoperatively, and sometime even death, which increases the anxiety. Coming out of anesthetic drugs occupy the biggest portion of anxiety in patient’s mind. Keeping this in mind, if we show to patients undergoing anesthesia and surgery, a little bit about what is happening in intraoperative period and how patients come out of anesthesia, especially about cool and calm outcome in the postoperative area, we may build certain level of patient’s confidence. Similarly, anxiety related to pain, death, torture, and
other misfortunate happenings can be reduced by showing videos/images before undergoing any procedure. Anesthesiologists feel that talking to the patient and reassuring them are the most effective method to decrease patient’s anxiety. Indeed, a confident professional and friendly relationship with the patient reduces anxiety. Seeing the patient well in advance as supposed to keeping them uniformed and then 1 h before surgery giving them all the information and asking them to decide, adequate explanation of the benefits, and risks along with the constant communication and reassurance throughout the procedure would establish rapport, build confidence, trust, and alleviate all fears. Different methods have been used to reduce patient’s anxiety such as giving sedatives or advising patients to listen to music of their preferences either preoperatively or during the operation. However, our study devised the method of showing video clipping/images of various patients going to surgery from PAC room to operation table showing the particular clipping of a specific operation to the patient undergoing some procedure, using questionnaire method devised by the HAM-A scale. By showing video clippings/images, our aim was to tell patient what anesthetic procedure he/she will have to go through, its effects and side effects so that patient should have an idea what is going to happen to him/her at least without increasing his/her anxiety and dispelling misconceptions associated with it. Viewing an anesthetic film about regional anesthesia preoperatively has been shown to decrease patient’s anxiety. However, some references do not coincide with the above study. These figures may be similar to those found in the study by Hyde et al., who reported that many patients (two-third) do not prefer to watch the operation. However, our study was not meant to show only procedures of operations but also involved questionnaire of assurance to allay anxiety of the patient. Due to this reason, ours was a very comprehensive and well-executed study, and there was a statistical difference of level of anxiety in both Groups I and II at four different times of study. The two groups did not differ in age, gender, weight, anesthetic techniques, history, types of previous surgery, and time from the enrolment to surgery. In Group I and Group II, total mean HAM-A score was 26 and 27, respectively showing moderate to severe anxiety before PAC. When we compared Group I and Group II statistically before PAC, $P > 0.05$ which was not statistically significant. After showing videos/images, the mean HAM-A score was 18 and 24 in Group I and II with statistically significant difference of $P$ value ($P < 0.001$) and $t$ value. One hour before surgery, mean HAM-A score in Group I was 20, and it was 28 in Group II again with a statistically significant difference ($P < 0.001$ h) [Table 1]. In Group I, there was statistically significant difference of HAM-A score before PAC and 1 h before surgery while there was no significant difference in Group II. Eight hours after surgery, there was again statistically significant difference in Group I and II [Figure 1].

**Conclusion**

We as anesthesiologists and psychiatrists feel that anxiety is more common in patients undergoing anesthesia and surgery in Indian scenario and in many developing countries. Main reasons of anxiety in the patients were due to the anticipated anesthetic complications, surgical techniques, success of operation, fear of being unconscious, pain and weakness in any part of body postoperatively as well as death related to anesthesia or surgery. At the moment, most commonly employed procedures to allay patient’s anxiety were to give anxiolytics. However, after this study, we came to the conclusion that if the patient is well-versed with all anesthetic and surgical procedures particularly by showing him or her videos/images and reassuring him/her yielded good result, with the result that there was statistical difference of level of anxiety between two groups. In Group II, 88% of patients received anxiolytics to allay anxiety as compared to only 10% cases in Group I. Group I has mild to moderate anxiety after receiving anxiolytics as compared to only 10% of anxiety between two groups. In Group II, 88% of patients would establish rapport, build confidence, trust, and alleviate all fears. Due to this reason, ours was a very comprehensive and well-executed study, and there was a statistical difference of level of anxiety in both Groups I and II at four different times of study. The two groups did not differ in age, gender, weight, anesthetic techniques, history, types of previous surgery, and time from the enrolment to surgery. In Group I and Group II, total mean HAM-A score was 26 and 27, respectively showing moderate to severe anxiety before PAC. When we compared Group I and Group II statistically before PAC, $P > 0.05$ which was not statistically significant. After showing videos/images, the mean HAM-A score was 18 and 24 in Group I and II with statistically significant difference of $P$ value ($P < 0.001$) and $t$ value. One hour before surgery, mean HAM-A score in Group I was 20, and it was 28 in Group II again with a statistically significant difference ($P < 0.001$ h) [Table 1]. In Group I, there was statistically significant difference of HAM-A score before PAC and 1 h before surgery while there was no significant difference in Group II. Eight hours after surgery, there was again statistically significant difference in Group I and II [Figure 1].

![Figure 1: Bar diagram showing level of anxiety in Group I and Group II at different time intervals](image-url)

**Table 1: Statistical comparison between Group I and Group II**

| Time interval | Mean | SD | $P$ |
|---------------|------|----|-----|
|               | Group I | Group II | Group I | Group II |
| Before PAC    | 27    | 26  | 4   | 3.8  | $>0.05$ (NS) |
| After PPT     | 18    | 24  | 1.75 | 2.35 | $<0.001$ (EHS) |
| 1 h before surgery | 15   | 22  | 1.35 | 2.44 | $<0.001$ (EHS) |
| 8 h after surgery | 27   | 15  | 2.56 | 2.35 | $<0.001$ (EHS) |
| In Group I before PAC and 1 h before surgery | 27   | 15  | 2.56 | 2.35 | $<0.001$ (EHS) |

PAC=Pre anesthetic check up, PPT=Power point presentation, EHS=Extremely highly significant, NS=Not significant, SD=Standard deviation
showing videos/images and 1 h before surgery and only mild anxiety after surgery while in Group II, where videos/images were not shown, patients suffered moderate to severe anxiety all the time.

From the discussion, we, therefore, conclude that after showing videos/images in Group I, the HAM-A scoring was extremely, significantly reduced and even if we compared the same Group I before PAC and 1 h before surgery, there was highly significant reduction in anxiety score.

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Conflicts of interest
There are no conflicts of interest.

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