

Perioperative anxiety: A short review

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Introduction

Anxiety is the subjective unpleasant feelings of dread over something unlikely to happen, such as the feeling of imminent death. It is often accompanied by restlessness, fatigue, problems in concentration, and muscular tension. Perioperative anxiety is described as a vague, uneasy feeling, the source of which is often nonspecific and unknown to the individual [1] but known to cause abnormal hemodynamics as a consequence of sympathetic, parasympathetic and endocrine stimulation. Anxiety occurs in any person in a transient or chronic form and can produce aggressive reactions that result in increased stress experienced by the patient, thus causing more difficult pain management in the postoperative period [2]. Perioperative period is a stressful event that triggers specific emotional, cognitive, and physiological responses of a patient.

The incidence of preoperative anxiety varies according to the setting of surgery, gender and motives for surgery. The prevalence is higher ranging from 32% in a study done on patients awaiting general surgery [3] to 50% in patients awaiting coronary artery bypass graft surgery (CABG) [4] and the prevalence is similar or even higher in Asian population [5].

Factors related to perioperative anxiety

Factors responsible for preoperative fears depend on age, gender, single or divorce, education, uncertainty of the exact day of surgery, patient's ability to understand the events that occur during surgical anesthesia, fear of surgery, separation from their family, financial loss, postoperative pain, fear of death and fear of unknown origin [6-8]. Lack of adequate and timely information to patients during the pre-anesthetic consultation increases patient anxiety. Study by Kiyohara et al. [9] found that patients receiving better preanesthetic information during the visit with the anesthesiologist showed reduced rates of anxiety compared to those who did not receive it. The day of admission can also be very stressful, as patients have to cope with both the stress of hospitalization and the anxiety about the impending surgery.

Psychological response to perioperative anxiety

The extent of anxiety levels varies individually. It fluctuates over time; starting prior to the surgery and persists until the late postoperative period. Different patient react perioperative periods in different ways. Some find it as relief as they are going to have a disease free life. Other considered it as one of the stressful event of lifetime. They are preoccupied with their discomfort or concerned about the success of surgery, strong fear of failure combined with career and family problems, postoperative state of physical health and problems adapting to the changed situation.

The consequences of perioperative anxiety are major cardiac events [10-13] (acute myocardial infarction, heart failure, pulmonary edema), high readmission rate (1st 6 month, 1 years), [10,11] poor quality of life and high rate of cardiac mortality. Impact correlate with high postoperative pain, increased analgesic and anesthetic consumption, prolonged hospital stay, adverse influence during anesthetic induction and patient recovery and decrease patient satisfaction with perioperative experience.

The reasons of increased morbidity in anxious patient are associated with the development of cardiovascular lesions as a consequences of health-related behaviors [14] (such as smoking, poor diet, poor compliance with treatment, or an inactive lifestyle) and direct influence on the myocardial perfusion, autonomic nervous system regulation, platelet activation, increased hypothalamo-pituitary-adrenal axis activity and exaggerated inflammatory processes [14-16].

Preoperative anxiety level is difficult to measure accurately. However, it can be estimated indirectly by measuring blood pressure, pulse, and decreased heart rate variability and patient irritability. Directly, it can also be estimated by measuring the plasma of cortisol and urinary level of catecholamine. At present, several validated questionnaires [5] are available and used to measure preoperative anxiety. These include Amsterdam Preoperative Anxiety Information Scale (APAIS), the State Trait Anxiety Inventory (STAI), Hospital Anxiety and Depression Scale (HADS), Visual Analogue Scale (VAS), Multiple Affect Adjective Check List (MAACL). The APAIS is a widely accepted [5] screening tool which has been translated and used in many countries including Germany, the Netherlands, Mexico, Thailand, Turkey Korea and Japan.

Management

These patients need to be intervened before and after surgery to reduce the morbidity and mortality. Interventions before surgery include developing good rapport and doctor patient relationships, education and structured interviews, psychotherapy, selective serotonin reuptake inhibitors (SSRIs) and benzodiazepine. The routine evaluation and effectively addressing the preoperative psychological distress facilitate early postoperative recovery. Early intervention in postoperative period to patients with evidence of psychological distress offers reduction of hospital length of stay, analgesic use, postsurgical

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Received: July 04, 2015; **Accepted:** August 14, 2015; **Published:** August 17, 2015

morbidity and help patients to adopt more effective coping strategies in their everyday lives.

Conclusions

There is prevalence of high degrees of preoperative anxiety in patients with elective surgery. Perioperative anxiety is often overlooked but it is associated with poor surgical outcome. At present several validated questionnaires are available to measure preoperative anxiety. Preoperative counseling and proper education regarding surgery will help in reducing preoperative anxiety and improving the quality of care.

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