

The Factor of Situational Anxiety before and after Surgery

Theofilidis Antonios*, Paramythiotis Daniel and Michalopoulos Antonios

1st Propaedeutic Surgery Department, AHEPA University Hospital of Thessaloniki, Greece

*Corresponding author

Theofilidis Antonios, 1st Propaedeutic Surgery Department, AHEPA University Hospital of Thessaloniki, Greece.

Received: February 20, 2024; **Accepted:** February 22, 2024; **Published:** March 05, 2024

The burden of negative emotional states, such as anxiety and depression and stress in people undergoing surgery it is indisputable, because it is a critical event that often happens perceived as an unfamiliar and frightening experience. Nursing also independently from the disease, often causes anxiety in many patients, who are going to be operated on. If constant and prolonged stress is not diagnosed early, can harm the patient and delay his recovery [1]. Perioperative anxiety is a significantly aggravating factor against the preparation of patients before a surgical operation. All are influenced by individual differences and its characteristics personality of each person, such as: age, nutritional status, chronic conditions diseases or disabilities, surgical procedure (location, type and extent; surgery), as well as previous surgical experiences.

Surgery is apart from a critical event, often a abruptly imposed reality, in which deep may be caused changes in people's lives, at the individual and family level. The uncertainty of the prognosis, the postponement of surgery, the fears of any mistakes during surgery or non-recovery from it are factors that work aggravating the stress and depression [2]. Preoperative anxiety manifests itself in a variety of ways ways, such as the delay in jaw relaxation, the difficulty in access of the veins, the cough during administration of the anesthesia as well as the increased requirement of anesthesia. The above may cause hypertension or arrhythmias in many patients, making them unable to undergo a planned surgery [3].

Anxiety may have a psychogenic origin, or it may originate from someone physical ailment. It depends on the person himself, on his lifestyle, his cognitive and emotional processes and by the way in which perceives reality. Every person has a certain level stress, which is considered normal under certain conditions. But in cases of increased anxiety, causes harm to the person and contributes to their under-functioning his activities, negatively affecting his health. Stress levels may increase well before patients are admitted to the hospital. Moreover, it cannot be measured easily, usually due to limited time measurement [4].

Definition of Stress

Stress is a normal physical and mental reaction that is caused when the person is called upon to face difficult and demanding challenges situations. Stress manifests itself in physical tension and firing multiple and unpleasant thoughts cerebrally. The modern man constantly faces stressful situations. Its intensity and frequency anxiety causes difficulty in dealing with his daily obligations.

Anxiety is that state of emotions, where they prevail feelings of impending danger, tension and nervousness. The autonomous nervous system works in such a way, which leads to its change respiratory rate, in increased heart function, in dry mouth, in sweating, in musculoskeletal discomfort and in a feeling of weakness. Therefore, stress is related to both psychophysiological behaviors and emotional and cognitive changes that react to a conscious or unconscious danger. It is also produced by specific brain mechanisms. It is caused by a complex response system that includes emotional, behavioral, biological and cognitive elements. Emotions such as anger, frustration and fear, irritability and depression act as inhibitors of the individual's ability to concentrate and willingness to cooperate. Worry, for example, is a component of it stress that can be considered as a cognitive process that prepares the person to prevent future risk with a particular feature of the dysfunction of his coping system. This psychosomatic weakness of the person includes either intense worries, which do not help to predict real future danger, or intense fear reactions, without substantial threat.

The main characteristics of stress are categorized as follows:

- Behavioral (e.g. Avoidance),
- Cognitive (e.g. Concentration Difficulties),
- Biological (e.g. Dizziness) and
- Interpersonal (e.g. Difficulty Forming Social Relationships).

When the pressure, which comes from anxiety, lasts and intensifies it can cause adverse immune, cardiovascular and central effects nervous system. If chronic stress is not treated it causes more serious conditions, such as insomnia, a weakened immune system, high blood pressure, and muscle pain. It can, finally, lead to disorders in growth, depression, heart disease and obesity [5].

Preoperative Anxiety

The time of waiting to perform a surgical procedure, causes unprecedented anxiety and fear in patients. Preoperative anxiety may be the reason for postponement of surgery or affect negatively the surgical procedure. It is explained as a possible reaction to fear and causes the patient's autonomic physiological response to fight or to avoids risk [6]. Studies have shown that people react differently in stressful situations and correlate this difference with the characteristic anxiety described by Spielberger as "established individual difference in stress sensation and perception of stressful situations". The level of stress depends on how the self a person judges a situation, i.e. whether he considers it to be more or less threatened from this condition [7].

Anxiety is different from fear. Fear is caused by a situation with known expected outcome and can be avoided. Instead, stress is caused when the danger is not felt and cannot be avoided. The stress is created when the patient is not sure about the future and how to behave when faced with danger. The main goal is early detection of danger or threat in a potentially harmful environment so that the individual is able to react effectively in order to escape from danger. By detecting the presence of preoperative anxiety, development is targeted of a treatment plan by health professionals with the aim of prevention. A clinical psychologist has the responsibility to monitor patients' anxiety, determine what is causing it and then to determine possible solutions to prevent or reduce it, preparing them for surgery. They are used in an effort to reduce stress pharmacological or non-pharmacological interventions [8].

The establishment of therapeutic communication sessions of both doctors and of nurses with patients is effective in reducing its intensity patient anxiety. The communicative and therapeutic relationship with the patient vs focused way can speed up the recovery process. During the communication, a patient and a healthcare professional interact between them. The patient usually expresses how he feels and the doctor or a psychologist helps him deal with the stressful situation he is experiencing. According to the results of the study "Effect of physician communication-patient in preoperative anxiety" conducted by Nikumb, better doctor-patient communication was found to be associated with lower stress. Humor can be used preoperatively environment for establishing communication relationships, reducing his stress patient, the release of anger in a socially acceptable way and avoidance painful feelings. When humor is used by a psychologist, it creates a healing atmosphere that increases the likelihood of more positive of surgical outcome [9].

In a study conducted in raters experiencing preoperative anxiety before caesarean section, it was found that listening to music immediately before the operation contributed to the reduction of anxiety. The researchers explained that music can disorient the patient from negative stimuli, creating a familiar and soothing state. The results of the survey proved that the women, who listened to their favorite music before the caesarean section, reported an increase in positive emotions and a decrease in negative ones, while at the same time they perceived that the situation was less threatening for them, in contrast to those who did not listen to music. Negative emotions cause specific action tendencies, such as flight or fight, while positive emotions they expand the field of attention, knowledge and action. Listening to music correlates with lower anxiety and consequently lower blood pressure, lower breathing rate and heart rate, under the condition that the patient should choose the type of music to listen to or even bringing a portable music device from home [7].

The measurement of preoperative anxiety in modern surgeries operations becomes difficult, mainly due to the imposed times restrictions. A variety of objective and subjective methods are available to measure preoperative anxiety. Objective methods include the indirect measurement of adrenergic activity using heart rate and blood pressure or its conductivity skin. Plasma cortisol, catecholamine excretion, and plasma catecholamines have been used as its most direct measures adrenergic activity. Nibset measured changes in electric potential of the skin and suggested that these changes provide a continuous record of a point known to vary with stress and its suppression [10].

The thought of surgery and anesthesia increase its feeling of stress. The incidence of preoperative anxiety reported in the majority

of surgical patients. Preoperative anxiety combined with fear can have adverse effects on perioperative patient experiences. Determining the factors that affect anxiety and fear, may be useful in the correct identification and in their reduction. In a study involving 247 patients, who underwent dental, surgery, the highest fear was found mainly in women and related to the waiting time for the operation, awakening during the operation and pain after the operation. In all women were identified as nervous before surgery. The female patients experienced more pain compared to males. Another important finding of the study was that some of the patients had no anxiety about surgery (3.1%) and anesthesia (13.1%). This it may be due to belief in God, as religion and culture influence catalysts in human reactions under stressful conditions [11]. In addition, the type of surgery is an important factor affecting Preoperative anxiety.

Although the science of medicine has evolved quite a bit, its process surgery is for the person - whether as a patient or as a family - a particularly stressful situation. Preoperative anxiety consists of subjective, consciously perceived feelings of restlessness and tension, accompanied or related to activation or stimulation of the autonomic nervous system systemic. Anxiety is created hours or even days before the operation and attributed to expected postoperative pain, separation from family, to the loss of autonomy, to the type of disease, to the extent that life is threatened of the patient from the disease, to the fear of the anesthesia of the surgical operation, as well as the fear of death. Preoperative anxiety is one of them most common concerns of patients who are about to undergo surgery. Stress levels may rise well before that admission to the hospital. Usually, it increases steadily at night precedes the surgery until the time the patient leaves the chamber to be taken to the operating room, while then peaking before the anesthesia. In operations without general anesthesia, the frequency of anxiety can change from moment to moment. In particular, high stress is recorded when patient arrives at the operating room (23%), during the application of anesthesia (35%) and after it (12%), at the beginning (15%) and during it surgery (9%) [12]. In addition, the hospital environment or of the clinic where the operation will be performed plays an important role in anxiety the patients. Factors such as the sound of machinery or the noise of surgical tools can have a significant effect on the rise of anxiety [13].

Although the percentage of patients possessed by preoperative anxiety cannot be fully ascertained, the literature states that it ranges between 60 and 80% [14]. When the patient experiences great stress may cause postoperative complications and therefore be required greater drug consumption and longer recovery time [15]. Patients experiencing anxiety respond to anesthesia differently from those who are calm. According to a survey carried out, on the one hand anxious patients need to be given a higher dose of anesthesia, compared to patients with a higher level of anxiety and on the other hand the latter they require higher doses of analgesics, post-surgery and longer length of hospital stay [14].

Conclusion

Anxiety in patients scheduled to undergo surgeries, is a subject, which worries so many professionals health as well as patients. In fact, stress manifests both psychologically as well as biologically, with implications for the recovery of the patient's health after surgeries. Stress, while expected, is assumed harmful because of its effects on the recovery stage. During pre-operative phase, the patient is exposed to various stressful situations, which they can cause anxiety both during and after surgery intervention [16]. The impact can be wide-ranging, with physical and mental

consequences and limitations in ability for everyday activities. Stress increases the chances of respiratory problems diseases, heart attack and weakening of the immune system systemic. Also, it contributes negatively to the surgical procedure as during the operation, may cause risks for the patient. Furthermore, is often associated with postoperative pain, increasing postoperative requirements for analgesic drugs. It is generally associated with poor postoperative outcomes, which often lead to a prolonged stay of patients in the hospital.

Therefore, interventions are needed to reduce it with the participation of medical and nursing staff and also with the intervention of mental health specialists - clinical psychologists.

References

1. Goebel S, Kaup L, Mehdorn H (2011) Measuring Preoperative Anxiety in Patients with Intracranial Tumors. *Journal of Neurosurgical Anesthesiology* 23: 297-303.
2. Ebirim L, Tobin M (2010) Factors Responsible for Pre-Operative Anxiety in Elective Surgical Patients at a University Teaching Hospital: A Pilot study. *The Internet Journal of Anesthesiology* 29.
3. Bailey L (2010) Strategies for decreasing patient anxiety in the perioperative setting. *AORN J* 92: 445-57.
4. Foggitt PS (2001) Anxiety in cataract surgery: pilot study. *J Cataract Refract Surg* 27: 1651-1655.
5. Taylor SE (2012) *Healthy Psychology* 8 Edition. McGraw Hill, New York 139-180.
6. Trauer T (1992) *Stress: Everything about the Causes, Mechanisms and Consequences of Nervous Tension*. Tentent; Warsaw, Poland 32-34.
7. Sęk H, Cieślak R (2011) *Social support, stress and health*. Warsaw: PWN Scientific Publishing House.
8. Kolodziejska G, Gorzkowicz B (2012) Estimate the prevalence of difficult situations in hospitalized patients. *Problems of Nursing* 20: 164-170.
9. Dulega A, Slusarsk B, Koziej D (2013) The scope of diagnosis of the condition of patients with cardiovascular diseases for nursing care. *Problems of nursing* 21: 452-461.
10. Gilmartin J, Wright K (2008) Day surgery: patients felt abandoned during the preoperative wait. *Journal of Clinical Nursing* 17: 2418-2425.
11. Krzych LJ, Pawlak A, Woznica A, et al. (2009) Conditions of severity of anxiety and depression in the perioperative period in the economically active men undergoing coronary artery and cardiopulmonary bypass. *Cardio – Thoracic Surgery, Poland* 6: 238-243.
12. Myszk W, Dudziak J, Torlinski L (2006) Ischemia -modified albumin new biochemical marker of myocardial ischemia review of the results of clinical trials. *Medical News* 75: 174-178.
13. Haugen AS, Eide GE, Olsen MV, Haukeland B, Remme AR, et al. (2009) Anxiety in the operating theatre: a study of frequency and environmental impact inpatients having local plexus or regional anesthesia. *J Clin Nurs* 18: 2301-2310.
14. Moerman N, Van Dam F, Muller M, Oosting H (1996) The Amsterdam Preoperative Anxiety and Information Scale (APAIS). *Anesthesia & Analgesia* 82: 445-451.
15. Kain ZN, Sevarino F, Alexander GM, Pincus S, Mayes LC (2000) Preoperative anxiety and postoperative pain in women undergoing hysterectomy. A repeated-measures design. *In Journal of Psychosomatic Research* 49: 417-422.
16. Spalding NJ (2003) Reducing anxiety by pre-operative education: make the future familiar. *Occupational Therapy International* 10: 278-293.

Copyright: ©2024 Theofilidis Antonios, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.