



JOHA

Journal Of Health Academics

ANXIETY RELATED TO ANAESTHESIA IN ROUTINE SURGERIES AND STRATEGIES TO MINIMIZE THE IMPACT ON PATIENTS

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ABSTRACT

Anesthesia plays a critical role in routine surgeries by ensuring that patients undergo procedures without pain and discomfort. However, the experience of anesthesia can be a significant source of stress, leading to adverse physical and psychological outcomes. A descriptive cross-sectional study was conducted in a selected base hospital in Sri Lanka, where 234 surgeries under general anesthesia were reviewed. An interviewer-administered questionnaire was used as the study instrument, with patients interviewed during the pre-medication period. The study included only routine surgeries, excluding patients with previous surgical experiences under general anesthesia. Relevant descriptive statistics were implemented to analyze the data. Anxiety is a pervasive condition observed among all patients, with varying degrees of severity. Notably, 28.6% of the patients in this study exhibited moderate anxiety levels, indicating a significant portion of the population experiences heightened emotional distress prior to surgery. This anxiety is particularly prevalent among patients aged 40 to 59 years, suggesting that this demographic may be more vulnerable to preoperative stress. The apprehensions associated with general anesthesia (GA) reflect a broad spectrum of patient concerns, emphasizing the psychological burden that precedes surgical interventions. A significant number of patients, 109 in total, expressed a profound fear of paralysis following the administration of GA, indicating a

prevalent anxiety regarding potential post-anesthetic complications. Similarly, 102 patients reported concerns about experiencing pain during the anesthetic procedure, underscoring the importance of addressing patient expectations and providing thorough preoperative explanations. Stress related to anesthesia in routine surgeries is a multifaceted issue that requires a holistic approach to address. By understanding the sources of stress and the physiological mechanisms involved, healthcare providers can implement effective strategies to minimize the impact on patients. Pharmacological interventions, psychological support, advanced anesthetic techniques, and ERAS protocols are all valuable tools in reducing anesthesia-related stress and improving surgical outcomes. Continued research and innovation in this field are essential to further enhance patient care and ensure a positive surgical experience.

INTRODUCTION

Anesthesia plays a critical role in routine surgeries by ensuring that patients undergo procedures without pain and discomfort. However, the experience of anesthesia can be a significant source of stress, leading to adverse physical and psychological outcomes. Understanding the sources and impacts of stress related to anesthesia is essential for developing effective strategies to minimize its effects. This paper aims to examine the causes of stress associated with anesthesia and review evidence-based strategies to mitigate this stress, ultimately improving patient care and surgical outcomes.

Stress related to anesthesia is a significant concern in routine surgeries, impacting both the physical and psychological well-being of patients. This paper explores the various stressors associated with anesthesia, including preoperative anxiety, intraoperative awareness, and

postoperative pain. It also discusses the physiological mechanisms behind stress responses and reviews current strategies to mitigate these effects, such as pharmacological interventions, psychological support, and advanced anesthetic techniques. Implementing comprehensive stress-reduction strategies can improve patient outcomes and enhance the overall surgical experience.

Preoperative anxiety is a common phenomenon among patients scheduled for surgery. The fear of the unknown, concerns about the surgical procedure, potential complications, and the effects of anesthesia contribute to heightened anxiety levels. Studies have shown that high levels of preoperative anxiety can lead to increased perioperative stress responses, including elevated heart rate,

blood pressure, and cortisol levels, which can negatively impact surgical outcomes. Although rare, intraoperative awareness, where a patient becomes conscious during surgery but cannot move or communicate, is a significant source of stress. The fear of intraoperative awareness can lead to severe psychological distress and long-term consequences such as post-traumatic stress disorder (PTSD). Ensuring adequate anesthetic depth and continuous monitoring are crucial to prevent such occurrences. Postoperative pain is another major stressor associated with anesthesia. Inadequate pain management can lead to prolonged recovery times, increased risk of chronic pain, and greater overall stress. Effective pain control is essential to reduce postoperative stress and improve patient satisfaction.

The body's response to stress involves the activation of the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system. These systems release stress hormones such as cortisol and adrenaline, which prepare the body to cope with stressors. While these responses are adaptive in the short term, chronic activation due to prolonged stress can lead to detrimental effects on the cardiovascular, immune, and nervous systems.

Pharmacological interventions, such as anxiolytics and sedatives, can be effective in reducing preoperative anxiety.

Medications like benzodiazepines are commonly used to help patients relax before surgery. Additionally, the use of multimodal analgesia, combining different classes of pain medications, can enhance postoperative pain control and minimize opioid consumption. Providing psychological support through preoperative counseling, cognitive-behavioral therapy (CBT), and relaxation techniques can significantly reduce patient anxiety and stress. Educating patients about the anesthesia process and what to expect during and after surgery can also alleviate fears and improve their overall experience. The use of advanced anesthetic techniques, such as regional anesthesia and nerve blocks, can provide superior pain control with fewer systemic side effects. Additionally, employing depth-of-anesthesia monitoring devices can help prevent intraoperative awareness and ensure adequate anesthetic depth. ERAS protocols are comprehensive, multidisciplinary approaches to perioperative care that aim to reduce stress responses and improve recovery. These protocols include preoperative education, optimization of nutrition, minimally invasive surgical techniques, and multimodal analgesia. Implementing ERAS protocols has been shown to reduce postoperative complications, shorten hospital stays, and improve patient satisfaction.

METHODS

A descriptive cross-sectional study was conducted at a selected base hospital in Sri Lanka to examine patient experiences with general anesthesia. The study reviewed 234 surgeries performed under general anesthesia. Data collection was facilitated through an interviewer-administered questionnaire, which was used as the primary research instrument.

Patients were interviewed during the pre-medication phase to assess their anxiety and concerns. The study focused exclusively on routine surgeries, excluding patients with prior experience of general anesthesia to ensure the accuracy and relevance of the findings. Appropriate descriptive statistical methods were applied to analyze the collected data.

RESULTS

Anxiety is a pervasive condition observed among all patients, with varying degrees of severity. Notably, 28.6% of the patients in this study exhibited moderate anxiety levels, indicating a significant portion of the population experiences heightened emotional distress prior to surgery. This anxiety is particularly prevalent among patients aged 40 to 59 years, suggesting that this demographic may be more vulnerable to preoperative stress. Furthermore, a pronounced gender disparity was observed, with female patients displaying higher levels of stress compared to their male counterparts. This finding aligns with existing literature that highlights gender differences in emotional responses to medical procedures. It is also noteworthy that no patients were classified as experiencing no anxiety before surgery, underscoring the ubiquity of anxiety in preoperative contexts. These

findings have important implications for tailoring preoperative care to address the specific needs of different patient groups.

The apprehensions associated with general anesthesia (GA) reflect a broad spectrum of patient concerns, emphasizing the psychological burden that precedes surgical interventions. A significant number of patients, 109 in total, expressed a profound fear of paralysis following the administration of GA, indicating a prevalent anxiety regarding potential post-anesthetic complications. Similarly, 102 patients reported concerns about experiencing pain during the anesthetic procedure, underscoring the importance of addressing patient expectations and providing thorough preoperative explanations. Another common fear was the possibility of failing to wake up after

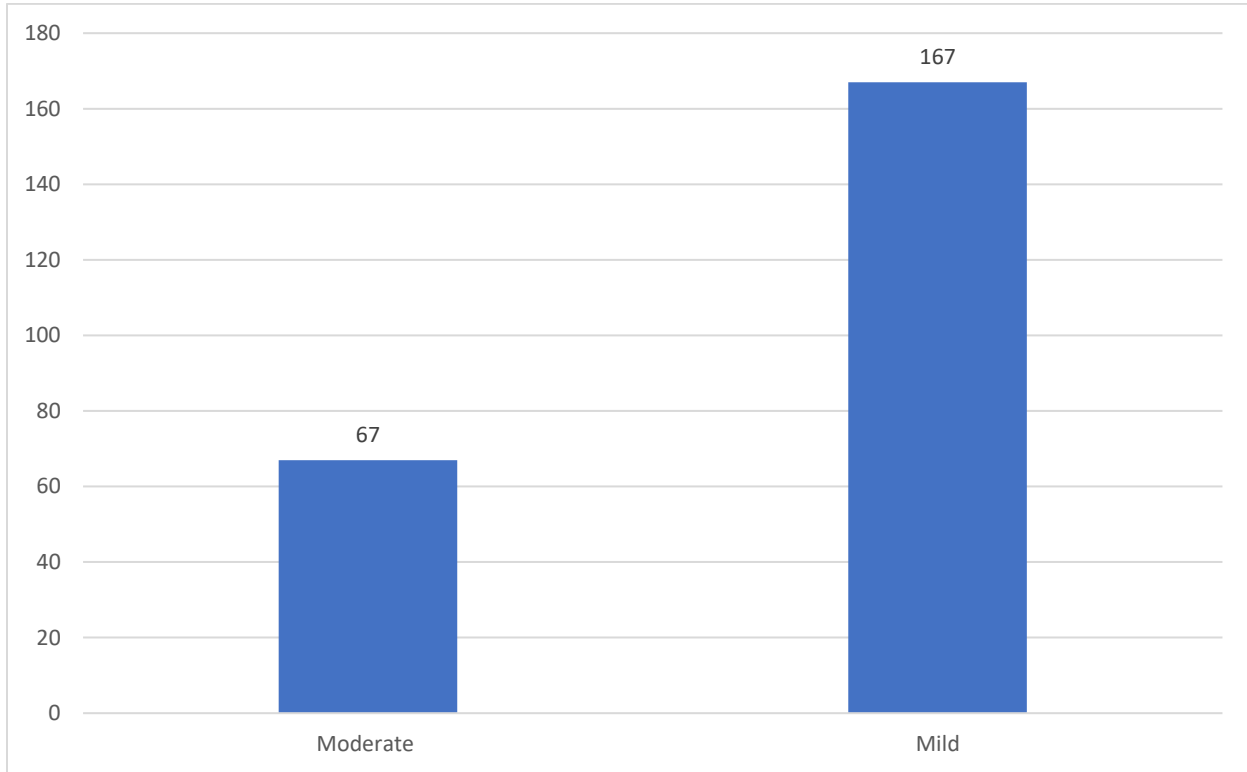
surgery, as reported by 76 patients, which highlights a deep-seated anxiety about mortality and the risks inherent in anesthesia. Additionally, 51 patients expressed fear of intraoperative

awareness, or waking up during GA, which is a particularly distressing concern that could impact the patient's overall trust in the surgical process.

Table 1 ; Association of sociodemographic characteristics among study participants

	Moderate anxiety N(%)	Mild Anxiety N(%)
Age		
18 - 39 Yrs	12(18.18)	54(81.82)
40-59 Yrs	42(37.2)	71(62.8)
>60 yrs	13(7.7)	42(92.3)
Gender		
Male	21(30.0)	49(70.0)
Female	46(28.1)	118(71.9)
Educational Status		
No Schooling	3(5.3)	54(94.7)
Up to O/L	44(48.3)	47(51.7)
Passes A/L	13(23.6)	42(76.4)
Graduated	7(22.6)	24(77.4)
Occupation		
Unemployed	9(30.0)	13(70.0)
Laboure	21(22.6)	72(77.4)
Non Executives	20(25.6)	58(74.4)
Executives	11(40.7)	16(59.3)
Professionals	6(42.8)	8(57.2)
Total	67	167

Figure 1 : Distribution of Anxiety among patients



Further anxieties include the fear of developing an addiction to pain medication post-surgery, reported by 48 patients, reflecting concerns about the long-term consequences of pain management. A smaller subset of patients, numbering 32, were worried about experiencing visual hallucinations in their surroundings, which may indicate underlying concerns about cognitive disturbances related to anesthesia. Concerns about receiving blood without consent, as noted by 24 patients, point to anxieties regarding autonomy and medical

ethics. Issues of privacy during anesthesia were highlighted by 19 patients, which suggests a sensitivity to personal dignity in the surgical setting. Hearing noises from the surrounding environment during surgery was a concern for 15 patients, while 10 patients were anxious about the possibility of the anesthetist leaving the operating theater. These fears collectively underscore the need for enhanced patient education and reassurance to mitigate anxiety and improve the overall surgical experience.

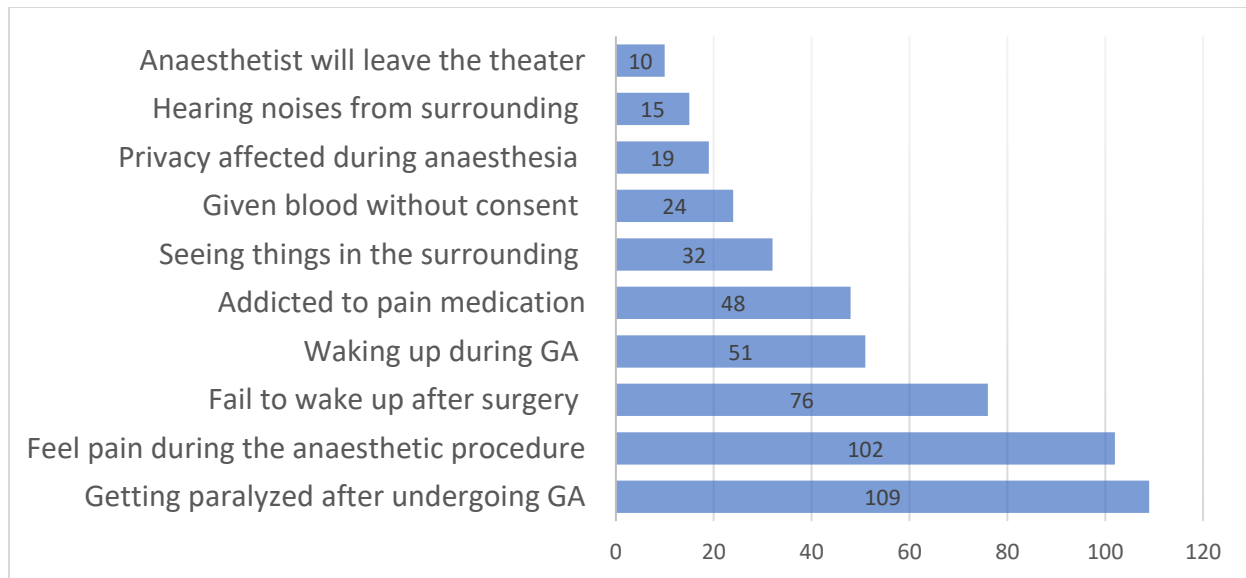


Figure 2: Distribution of fear factors among study participants

DISCUSSION

The analysis of preoperative anxiety among patients reveals several critical patterns that have direct implications for clinical practice in hospital settings. The observed anxiety, present to varying degrees in all patients, underscores the universal nature of preoperative stress. With 28.6% of patients experiencing moderate anxiety, this study highlights the significant psychological burden borne by nearly a third of the surgical population. When comparing anxiety levels across different demographics, it is evident that patients aged 40 to 59 years are particularly susceptible to moderate anxiety. This finding suggests that middle-aged individuals might face unique stressors, possibly related to personal and familial responsibilities or health

concerns, making them more vulnerable to preoperative anxiety.

The gender disparity noted, with female patients exhibiting higher levels of anxiety than their male counterparts, aligns with existing research that identifies women as more likely to experience anxiety disorders. This comparison further emphasizes the need for gender-sensitive approaches in preoperative care. Women may require more comprehensive psychological support and tailored communication strategies to alleviate their heightened anxiety.

An important and striking finding is that no patients were classified as experiencing no anxiety prior to surgery. This contrasts

with some studies that report a range of anxiety levels, including low or absent anxiety in certain patients. The absence of a "no anxiety" group in this study highlights the intense psychological pressure associated with impending surgery in this particular patient population, pointing to a need for universal anxiety screening and intervention in the preoperative phase.

These findings have several important implications for clinical practice in hospital settings. First, the data suggests that preoperative care protocols should be revised to incorporate routine anxiety assessments for all patients, with particular attention to those in the 40-59 age group and female patients. Tailored interventions, such as counseling, anxiety-reducing techniques, and enhanced patient education, could be implemented to address the specific needs of these high-risk groups. Additionally, the universal presence of anxiety underscores the necessity of fostering a supportive and empathetic clinical environment, where patients feel heard and understood.

Finally, these findings suggest that hospitals might consider training staff to recognize and respond to signs of anxiety more effectively. By proactively managing preoperative anxiety, healthcare providers can improve patient outcomes, enhance satisfaction with care, and potentially reduce the incidence of anxiety-related complications during and

after surgery. This approach could lead to a more patient-centered model of care, where psychological well-being is given as much priority as physical health.

The analysis of patient apprehensions related to general anesthesia (GA) reveals a complex array of fears that highlight the significant psychological stress experienced by individuals undergoing surgical procedures. The most prevalent concern, expressed by 109 patients, is the fear of paralysis post-anesthesia, which underscores a widespread anxiety about potential irreversible complications. This fear is closely followed by concerns about pain during the anesthetic procedure, reported by 102 patients. The prevalence of these anxieties points to a critical need for clear and comprehensive preoperative communication to manage patient expectations and alleviate fears regarding the anesthetic process.

When comparing these anxieties, it becomes evident that fears related to the immediate effects of anesthesia, such as paralysis and pain, are more dominant than those related to less immediate, but equally serious, concerns like failure to wake up post-surgery, which was reported by 76 patients. This latter fear, while less frequently mentioned, is deeply rooted in anxiety about mortality and the risks associated with anesthesia, indicating a profound psychological impact that extends beyond the physical aspects of surgery.

Concerns about intraoperative awareness, where 51 patients feared waking up during GA, reveal a specific anxiety that could severely undermine trust in the surgical team and the safety of the procedure. This fear, though less common than those about paralysis or pain, is particularly distressing and could lead to long-lasting psychological effects if not properly addressed. Similarly, the fear of developing an addiction to pain medication, reported by 48 patients, suggests anxiety about the long-term management of postoperative pain and the potential for dependency, which could further complicate the recovery process.

Less common, but still significant, are fears related to visual hallucinations, receiving blood without consent, and issues of privacy, reported by 32, 24, and 19 patients respectively. These concerns reflect underlying anxieties about cognitive disturbances, autonomy, and personal dignity, all of which are crucial to consider in the context of patient-centered care. The fact that some patients also feared hearing noises during surgery (15 patients) or the anesthetist leaving the operating theater (10 patients) indicates a sensitivity to the perceived control and security of the surgical environment.

The comparative analysis of these anxieties suggests that while certain fears, such as those related to paralysis and pain, are more commonly shared, others like

intraoperative awareness and post-surgical addiction, although less frequent, carry significant psychological weight. This has important implications for clinical settings in hospitals.

To effectively address these fears, hospitals should consider implementing comprehensive preoperative counseling sessions that thoroughly discuss the risks and realities of anesthesia. Tailored educational materials and one-on-one discussions could be crucial in alleviating fears about paralysis, pain, and intraoperative awareness. Moreover, enhancing the transparency of the anesthetic process, ensuring informed consent, and providing detailed information about postoperative care, including pain management strategies, could help reduce anxiety related to autonomy and long-term recovery.

Furthermore, hospitals should prioritize creating a reassuring surgical environment, where patients feel secure in the knowledge that their care team is attentive and present throughout the procedure. By addressing these anxieties proactively, hospitals can not only improve patient trust and satisfaction but also potentially reduce the psychological impact of surgery, leading to better overall outcomes and a more patient-centered approach to care.

CONCLUSIONS

Stress related to anesthesia in routine surgeries is a multifaceted issue that requires a holistic approach to address. By understanding the sources of stress and the physiological mechanisms involved, healthcare providers can implement effective strategies to minimize the impact on patients. Pharmacological interventions, psychological support,

advanced anesthetic techniques, and ERAS protocols are all valuable tools in reducing anesthesia-related stress and improving surgical outcomes. Continued research and innovation in this field are essential to further enhance patient care and ensure a positive surgical experience.

REFERENCES

1. Kain, Z. N., Mayes, L. C., Caldwell-Andrews, A. A., Karas, D. E., & McClain, B. C. (2006). Preoperative anxiety, postoperative pain, and behavioral recovery in young children undergoing surgery. *Pediatrics*, 118(2), 651-658.
2. Pandit, J. J., & Cook, T. M. (2013). NAP5: accidental awareness during general anaesthesia in the United Kingdom. *The British Journal of Anaesthesia*, 110(4), 501-509.
3. Kehlet, H., & Wilmore, D. W. (2008). Evidence-based surgical care and the evolution of fast-track surgery. *Annals of Surgery*, 248(2), 189-198.
4. Chou, R., Gordon, D. B., de Leon-Casasola, O. A., Rosenberg, J. M., Bickler, S., Brennan, T., ... & Wu, C. L. (2016). Management of postoperative pain: a clinical practice guideline from the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society
- of Anesthesiologists' Committee on Regional Anesthesia, Executive Committee, and Administrative Council. *The Journal of Pain*, 17(2), 131-157.
5. Kehlet, H., & Mythen, M. (2011). Why is the surgical stress response still controversial? *Surgery*, 150(3), 320-323.