

Impact of Anxiety on Patients Referred for Transesophageal Echocardiography

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Short Editorial related to the article: *The Impact of Anxiety on Patients Referred for Transesophageal Echocardiography*

In this issue of ABC Cardiovascular Imaging, anxiety is highlighted not only as a factor in the subjective assessment of patients' experiences during invasive medical procedures (transesophageal echocardiography, TEE) but also for its influence on the amount of sedative drugs administered during the procedure.

The study *The Impact of Anxiety on Patients Referred for Transesophageal Echocardiography*, conducted at a tertiary institution, provides a detailed analysis of multiple characteristics of patients undergoing the exam, its influence on sedation, and revisits important aspects of good medical practice. The study results indicate that anxiety, assessed using easily implemented indicators,¹ was present in 62% of patients. Self-assessment tables show mild anxiety in 40%, moderate anxiety in 16%, and severe anxiety in 6%. It is part of the experience of echocardiographers performing transesophageal exams to deal with patient anxiety, especially among younger individuals.^{2,3}

Multiple variables are influential; after a satisfactory consultation time and an excellent doctor-patient relationship, the absence of “questions or need for additional clarifications” from patients may be related to their embarrassment in ignoring details they assumed to be general knowledge in the current “Google era”.⁴ The previous unrestricted functionality of young individuals contributes to insecurity and anxiety regarding hospital admission. In addition, the array of medical equipment and the fear of a new reality – the possibility of confirming a medical condition with serious consequences – contribute to patient anxiety.

An interesting aspect of this study is that it was conducted in patients with a high sociocultural level, with 92% having completed university education, which is uncommon in our setting. Broad access to information and a higher cultural level did not help reduce pre-procedure anxiety in unfamiliar situations (66% of the studied patients were undergoing TEE for the first time). The excess of available information may play a role in increasing pre-procedure anxiety.⁵

The results obtained confirmed expectations: younger patients and those with a higher self-assessed level of anxiety required

higher doses of medication to achieve adequate sedation during the procedure. These findings are consistent with existing literature, both for invasive diagnostic procedures (TEE, colonoscopy)⁶ and for achieving appropriate levels of anesthesia during surgical procedures.⁷ Also, they were shown to be related to increased activation of the neuroendocrine axis.⁸ Among patients whose indication for the test was made after hospitalization, older individuals, with comorbidities that had required previous hospital procedures or admissions, showed lower levels of self-assessed anxiety.⁹ In these patients, clinical deterioration requiring intensive treatment may trigger awareness of the possibility of the end of life.¹⁰ This increase in anxiety levels can be further exacerbated by the effects of medications used in critically ill patients (vasopressors, corticosteroids), as well as the need for respiratory support and invasive procedures, including TEE.¹⁰

The main risks of the procedure analyzed by the authors — an increase in vagal autonomic tone, hypotension, and respiratory depression with hypoxia — may be exacerbated by the need for higher doses of opioids/benzodiazepines.¹¹

Identifying contributing factors and understanding and implementing measures to mitigate or control anxiety can help multidisciplinary teams achieve effective management in the peri-procedural period, improving patient experience. There are advantageous benefits, such as better quality of image acquisition, and lower risk of sedation complications in young patients, in individuals with a low body mass index,⁶ and in anxious elderly patients with comorbidities who have lower tolerance to additional complications.

Complex procedures, such as endovascular aortic prosthesis implantation, even after significant functional improvement, can still be associated with anxiety symptoms for up to six weeks post-intervention.^{12,13} A reasonable rationale would be to seek faster relief through more intensive psychological preparation. Low-cost measures that have shown effectiveness include music therapy and aromatherapy,^{14,15} which are already used in percutaneous interventions guided by computed tomography (tumor biopsies, abscess drainage, tumor ablation).

The analysis made by Munn et al. is highly relevant regarding the repercussions of anxiety and the opportunity to reflect on different resources and approaches¹⁵⁻¹⁷ to alleviate patient distress before, during, and after invasive procedures. These procedures have become increasingly frequent, integrated into the routine of various institutions. Sometimes, for this reason, we adopt “conscious sedation” when continuous awareness should be maintained. Invasive procedures often cause concern, anxiety, and distress in patients; this publication invites us to remain alert and vigilant to these possibilities.

Keywords

Anxiety; Patients; Transesophageal Echocardiography

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