

Anaesthesia Challenges Risks, Stress and Fatigue with Patients Safety

Anaesthesia covers a large spectrum of highly specialized disciplines: pre-hospital emergency medicine, pre-interventional consultation, regional anaesthesia, sedation, general anaesthesia, intensive and intermediate care and acute and chronic pain. Anaesthesia demands knowledge, technical and other skills to deal with elective and urgent interventions. Anaesthesiologists provide a very high quality of professional service daily. Therefore, anaesthesia is attractive and can provide great professional satisfaction. However, to be an anaesthesiologist is not only a pleasure but also a risk. Anaesthesiology has been identified as a stressful specialty. Sources of chronic stress include competence factors, production pressures, long working hours, night call, and fatigue. Fears of litigation, economic uncertainty, and interpersonal relationships have also been identified as sources of stress. A survey that was conducted among retired members of the American Society of Anaesthesiologists (ASA) has indicated that "demands of night call" is the most stressful aspect of anaesthesia practice followed by "difficult" anaesthetic cases, liability issues, workload, burnout, and economic issues.¹

Useful literature for understanding the specific acute stressors encountered by Anaesthesiologists is the study of stress in pilots because of the similarities in the nature of the jobs: induction, maintenance, and emergence of anesthesia versus take-off, maintenance, and landing of an aircraft. Among pilots, increased blood pressure, heart rate, catecholamine, and salivary cortisol have been demonstrated to occur during stressful situations^{2,3}. Such sympatho-medullary and adrenocortical changes may exist in anaesthesiologists as well. Even inside a 'safe' hospital, anaesthesiologists are exposed to risks from exposure to blood, body fluids and radiation. The risk of transmission of hepatitis B virus infection by a needlestick injury is between 6 and 30% without post-exposure prophylaxis or with insufficient hepatitis B virus vaccination.⁴ The risk of transmission of hepatitis C virus infection by a needlestick injury is between 3 and 10%, depending on the level of virus load.⁵ Hepatitis C virus infection even after post-exposure

treatment may lead to chronic hepatitis, liver carcinoma and liver failure with, potentially, a fatal outcome. A lower transmission rate is associated with HIV (<0.3%). Independent of the source, anaesthesiologists suffer from significant anxiety and emotional distress following a needlestick injury. Potentially harmful effects of ionising radiation affect increasing numbers of anaesthesiologists because more and more interventions are performed with radiological support. These harmful effects range from lens injuries to genetic or carcinogenic effects. The carcinogenic effects may be particularly hazardous to the thyroid gland. There is no known safe dose below which an induced neoplasm does not occur.⁵ However, to date, no increased risk of death caused by cancer has been reported in anaesthesiologists compared with internists.⁷ The greatest risks to which anaesthesiologists are exposed are suicide and drug-related deaths. A figure of about 250 suicides per 100 000 anaesthesiologists has been estimated.⁷ This suicide rate is 15 times higher than in the normal population⁸ and statistically significantly higher than among internists.⁷ Depression and substance abuse are among the most important risk factors for suicide. In our speciality, in common with other healthcare providers, depression is frequently associated with 'burnout'. Burnout is associated with an increased level of emotional exhaustion and de-personalization and a low level of personal accomplishment. It is described as an individual experience specific to the context of work.⁹ Different factors are implicated in the development of burnout in our profession: job demand (lack of time to complete tasks, work environment); lack of control (increasing production pressure, unrealistic goals); relationships (harassment); fear about change (restructuring of job, operating theatre or hospital); lack of support (poor management, care of extremely ill patients); and difficulties related to the home/work interface.^{10,11} Residents have been shown to have high burnout scores, particularly in personal accomplishment, probably because they are young, often single and less in control of work life.¹² Burnout and depression are also strongly correlated with suicidal ideations.¹³

Anaesthesiologists have the responsibility to maintain their health and vigilance in order to place their patient's interests foremost and protect their patients from exposure to undue risk. Part of this is to ensure optimal team performance, which includes managing the overall fitness of the anaesthesia care team, including but not limited to, addressing the effects of fatigue.

Fatigue is an impairment that may jeopardize both patient safety and physician health and wellbeing. It is a complex issue that can be affected by the individual provider, other personnel involved in the patient's care, and the organizations where that care is provided. Anaesthesia groups and departments should work within their organizational structures to develop and implement policies to address fatigue-related provider impairment and its implications for staffing and the safe delivery of patient care. Given the multifactorial nature of fatigue, policies should allow for flexibility based on the group or facility's unique circumstances. Policies also should include features designed to encourage staff to report their own fatigue or the suspected fatigue of a colleague, without fear of reprisal.

Depression and substance abuse are considered as a moral weakness rather than a disease process. Therefore, the clinicians concerned are often reluctant to seek medical advice. Self-diagnosis and self-prescription are common, and psychiatric help is rarely requested.¹³ The fear of losing employment is also a reason for not seeking treatment. Death, either by suicide or by unintentional overdose is a common outcome of depression, burnout and drug abuse. Optimization of workload would probably not be sufficient to escape from this epidemic level of burnout, drug abuse and suicide ideation among clinicians. We also need to change to a culture of individual support, to eliminate the barriers to use of psychiatric resources and to promote professional satisfaction: for instance, with a wonderful, calm and safe flight over the ocean, mountains and land.

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