The monograph
"Aspects of patient safety in anaesthesia. Medication errors in anaesthesia and intensive care"

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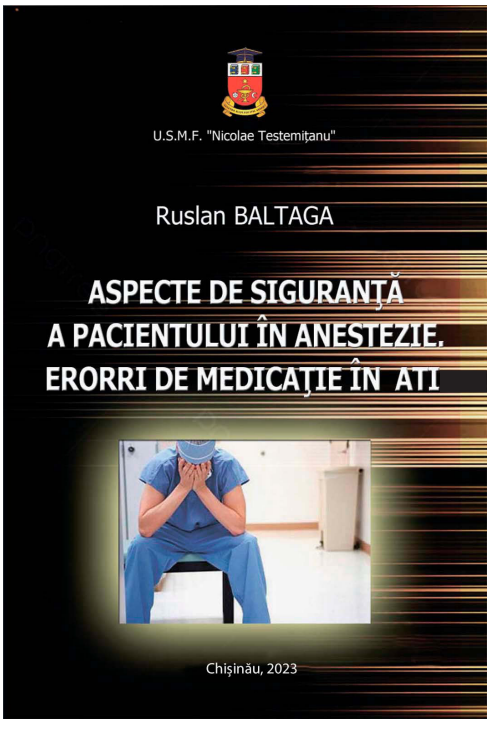

Patient safety is one of the biggest challenges facing healthcare around the world. Safety is the foundation on which quality and then patient-centered care is built. All combined they must meet the goal of the highest standards of care. The goals of safety and quality must be achieved before, during and after the application of anaesthesia.

The concepts of quality and safety are closely interconnected and provide continuity. There is no common opinion as to the clear difference between them. Safety can also be seen as a quality issue and quality care must be based on safety. This is applicable more to medicine in general and less to anaesthesia. An important difference is that quality is usually measured in terms of success, while safety is measured in failures, especially catastrophic failures.

Success in achieving the desired outcome includes not only safe procedures, but also those that incorporate elements of evidence-based medicine, mainly because one's own experience is not sufficient in judging the positive or negative consequences of the procedure, or of the drug. Since anaesthesia is not a therapeutic procedure on its own, complete safety must be the primary goal of every anaesthesia. This can sometimes seem an impossible task.

To everyone's benefit, quality and safety have become increasingly important in modern medicine. Anaesthesiology and Intensive Care are frequently identified as an early adopter and promoter of patient safety principles, and held up as an example in dramatically improving outcomes.

In the Republic of Moldova, the concept of patient safety in anaesthesia is one of the research topics of *Valeriu Ghereg* Department of Anaesthesiology-Reanimatology No 1 of *Nicolae Testemitanu* State University of Medicine and Pharmacy and is coordinated by the author of this monograph. Society of Anaesthesiology and Reanimatology of the Republic of Moldova has adopted and is promoting Helsinki Declaration on Pateient Safety in Anaesthesia. In the frame of these activities a series of studies and implementation processes have been carried out to improve patient safety at the National level. This monograph is perfectly fitting the strategy to improve patient safety in anaesthesia, intensive care and related fields. The monograph is divided in two parts.:

In Chapter 1 – "Patient Safety in Anaesthesia" the patient safety issues are described starting with generalities and continuing with patient safety in Anaesthesia, Intensive Care. Combined literature review data and results of own studies "Implementation of WHO Surgical Safety Checklist and Global Pulsoximetry" which describes results of their implementation in the Institute of Emergency Medicine of the WHO Checklist together with its Pulse Oximetry component and the remote follow-up study results are presented as well. The results of the implementation of the checklist showed an improvement of the communication parameters within the anaesthesia and surgical team, as well as an improvement of the surgical treatment results (fewer septic and non-septic complications). In addition to the complex aspect of the Checklist items, the influence of pulse oximetry monitoring was studied (also implemented in all operating rooms, before the study there were only 2 functioning pulse oximeters at 22 operating tables). In the study, pulse oximeters had the possibility to record pulse oximetry parameters to all patients in all rooms. Data analysis showed a reduction in hypoxaemia episodes over time after implementation of surgical safety measures, including pulse oximetry in all operating rooms. These results stressed once more the importance of mandatory monitoring of patient during anaesthesia as an important component of patient safety. A study comparing oxygenation in local anaesthesia vs general anaesthesia is reported in this chapter. Oximetry values ranging from 93-98% are recorded more in general anaesthesia patients, and values from 90-92% are virtually identical in both types of anaesthesia. The explanation could come from the fact that although the above-mentioned values are within the normal range, nevertheless a tendency for better oxygenation is seen in regional anaesthesia, where usually (in the absence of complications) the airway manipulation is not involved.

Chapter 2 – "Medication errors" deals with the general issue of medication errors, especially in Anaesthesia and Intensive Care, where interest is increased due to several reasons: many drugs are administered with an effect on vital functions (effect on the degree of impairment of consciousness, impairment of airway permeability, respiratory function, cardiac function, muscle tone, etc.) and therefore with the potential for complications, including fatal ones. The chapter describes general issues, nomenclature, classification, risk factors, prevention strategies. The literature review is supplemented by a series of own studies on medication errors. The study "Reporting medication errors" involved anonymous questioning of all employees of an ICU department (specialist doctors, resident doctors, nurses) about medication errors. One of the main conclusions of the study is that the phenomenon of medication errors exists in anaesthesiology services in the Republic of Moldova, the qualification and professional status of the medical staff do not influence the frequency of medication errors. Other aspects, such as safety of use of cardiotonics and vasopressors, safety of neuromuscular blocking agents, safety aspects of regional anaesthesia are described.

In conclusion the monograph covers a wide range of patient safety aspects in anaesthesia, which is a modern concept in medicine. A systematic approach to problem description, identification of solutions and proposal of practical recommendations are included in the monograph and will serve as a good guide for further studies and for practical implementation of patient safety good practices in anaesthesia, intensive care and related fields.

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