

## **POSITION**

by Prof. Stoyan Milanov, MD, PhD

UMBALSM "N.I. Pirogov"

Head of Department of Anesthesiology and Intensive Care

on the PhD thesis of Dr. Albena Sashova Atanasova entitled "ULTRASOUND-GUIDED SUPRACLAVICULAR BRACHIAL PLEXUS BLOCK IN CHILDREN" for awarding the educational and scientific degree "PhD"

**Research supervisor:** Assoc. Dr. Rumyana Ruseva Andonova, MD, PhD;

**Form of PhD studies:** Independent training;

**PhD speciality program:** Anesthesiology and intensive care

### **General presentation of the PhD program and the procedure**

For position, a set is presented in accordance with the regulations for the Development of the Academic Staff of N.I. Pirogov UMBALSM - EAD. Dr. Albena Sashova Atanasova was born on 17.04.1988. She graduated from the Medical University - Sofia, Faculty of Medicine in 2012. She has begun his professional career as a medical doctor in the Department of pediatric anesthesiology and intensive care at Pirogov Hospital in 2012. Acquired the specialty "Anesthesiology and intensive care" in 2018. She has completed courses on regional techniques in Switzerland. She is a member of ESA, ESRA and Society of Anesthesiologists in Bulgaria. The PhD thesis is presented on 136 pages and contains 24 tables, 24 figures, 1 appendix, and a references of 103 titles. The arrangement of the PhD thesis is precise and meets generally accepted criteria for layout.

### **Actuality of the subject of the PhD thesis**

The PhD thesis submitted for position concerns a relatively innovative field in anesthesia practice - ultrasound-guided regional technique in a specific group - fractures of the humerus and forearm in children- with a focus on the quality of intra- and postoperative analgesia. The topic of the PhD thesis fully corresponds to the professional experience and scientific affinities of the PhD student, as well as to the specific profile of the scientific unit. The presented literature review defines the specific trauma-pathology with the relevant anatomical age characteristics of the experimental group, the historical and contemporary aspects of the brachial plexus block technique and, as a special value of the review, the experience in Bulgaria regarding the applied technique. The literature review is excellently structured, without unnecessary cosmetic elaborations, terminologically precise and orderly, it clearly outlines the scientific field and provides a basis for deriving the scientific hypothesis and the goal of the PhD work.

### **Methodology of PhD thesis**

The aim that the PhD student sets for herself is a clearly formulated and accurate evaluation of the effectiveness of the regional technique in terms of the quality of intra- and postoperative anesthesia through the use of a practical innovative technical facilitation of the implementation of the regional anesthesia- ultrasound – guided. 6 specific tasks have been set to achieve the specified goal. The PhD student uses an appropriate set of methodological tools and a rigorously formulated prospective randomized design with well-defined patient cohorts - experimental and control group - with specified inclusion and exclusion criteria. The measured parameters and indicators are precisely selected and at the same time extensive, which gives grounds for confirming accurate results, without unnecessary survey noise. A detailed description of the supraclavicular block technique is made, modern criteria and an approach for assessing the quality of analgesia in children are presented. I define the research methodology as adequate and enabling to achieve the intended aim with a view to obtaining a real scientific answer to the tasks set.

### **Evaluation and characterization of PhD thesis and contributions**

The PhD student's own research is based on the accepted methodology. The high success rate of the applied regional technique in the experimental cohort is impressive. A thorough inter-group analysis of the quality of intra- and postoperative analgesia (including with parental participation), hemodynamic stability, PONV, the number of NSAIDs/opiates used was performed. Excellent safety of the regional technique used in the experimental group was established. The conclusions of the dissertation are well outlined and strictly formulated. I accept that the contributions outlined by the author of the dissertation work derive from the solution of the set tasks and I define them as having a deep scientific-applied and innovative character, especially in the part of regional anesthesia with US guidance as a gold standard in the pediatric population.

### **Publications and personal contributions of the PhD student**

Attached are four publications in connection with the PhD thesis work, in all of which the PhD student is the lead author. This determines the leading and real contribution of the PhD student in the overall development, as the obtained results, contributions, and achievements in the PhD thesis are a personal author's credit.

### **Conclusion**

The PhD thesis submitted for position on the topic "Ultrasound-guided supraclavicular brachial plexus block in children" contains scientific and applied results and contributions of an innovative nature on current and scientific issues. The presented materials and dissertation results fully correspond to the requirements, determined in the ZRASRB and the Regulations for the development of the academic staff of UMBALSM "N.I. Pirogov" - Sofia. On these topics, I give a positive assessment and recommendation to the honorable Scientific Committee to award Albena Sashova Atanasova the scientific and educational degree "PhD".

14.10.2022

.....

Sofia, Bulgaria  
PhD

Prof. Stoyan Milanov, MD,