

POSITION

by Prof. Stoyan Milanov, M.D., Ph.D. UMHATEM „N.I. Pirogov“, Clinic of Anesthesiology and Intensive Care Medicine, regarding dissertation defense of doctor Elena Toncheva Ivanova on topic: „**APPLICATION OF POPLITEAL NERVE BLOCK IN LOWER LEG INJURIES IN PEDIATRIC PATIENTS**“ for the acquisition of educational and scientific degree „Doctor“ (Ph.D.).

Scientific supervisor: Associate Professor Rumyana Andonova, M.D., Ph.D.

Dissertation form: free Ph.D. student; **Scientific specialty:** Anesthesiology and Intensive Care Medicine

General presentation of the Ph.D. student and the procedure:

A set of documents is provided for stating a Position, according the regulations for the development of the academic members of UMHATEM „N.I.Pirogov“.

Dr. Elena Ivanova was born on 26.12.1988. In 2014 she graduated from Medical University of Sofia, Medical Faculty. In the same year she started her professional medical career in the Clinic of Anesthesiology and Intensive care Medicine in UMHATEM „N.I.Pirogov“. In 2018 doctor Elena Ivanova acquired a specialty degree in Anesthesiology and Intensive care Medicine. She has completed several trainings in regional anesthesia in Western Europe with rewards. She is an active member of ESA, ESRA and Society of Anesthesiologists in Bulgaria. The dissertation work consists of 145 pages and includes 20 tables, 35 figures, 4 appendixes, 4 annexes and 202 literature sources. The design of the dissertation work corresponds to the generally accepted design criteria.

Actuality and definition of the dissertation topic:

The dissertation work, presented for Position, concerns an innovative part of anesthesiology practice - ultrasound guided regional technique in a specific contingent – lower leg injuries in pediatric patients - with an emphasis on intra- and postoperative analgesia. The topic of the dissertation corresponds to the professional experience and scientific interests of the Ph.D. student, as well as to the specific profile of the scientific unit. The literature review presents the specific trauma-pathology with its relevant anatomical age varieties of the contingent, the historical and nowadays aspects of the popliteal block. The literature review is well structured, terminologically precise and well arranged, with a clear outline

of the polemic, leading to actual basis for proving the determined scientific hypothesis and goal.

Methodology of the dissertation work:

The goal determined by the Ph.D. student is well formulated and concerns the evaluation of the effectiveness of the regional technique in terms of the quality of intra- and postoperative analgesia with the use of ultrasound guidance for facilitated regional block in the popliteal region. In order to do so, there are five 5 tasks assigned in the dissertation work. An appropriate methodology is used in a prospective randomized design based on two pediatric patient cohorts with lower leg injuries taking in mind strict inclusion and exclusion criteria. The measured parameters and indicators are correctly selected and provide a basis for an accurate intergroup analysis of the results. The survey methods are sufficiently thorough to evaluate the effectiveness of both techniques in terms of the achieved analgesic levels. A detailed description of the US-guided technique of the popliteal block under procedural sedation has been made. The methodology of the research is adequate and allows to achieve the goal of assigned tasks.

Evaluation and characterization of dissertation work and contributions:

The research of the Ph.D. student is completely accomplished following the presented and accepted methodology of the dissertation work. The etiology and epidemiology of the injuries in the pediatric patients are described in details. The size of the patient groups is sufficient for the research results. A detailed description of the regional technique is made with adequate insertion of certain clinical case in both interventional and controlled group. There is a deep analysis made between the groups regarding the quality of the intra- and postoperative analgesia (including survey), hemodynamic stability, possibilities for early rehabilitation and dehospitalization, mean anesthesia time, quantity of used postoperative analgesics. A good safety of the used regional technique is established. The conclusions of the dissertation work are well stated and formulated. I assume that the contributions of the dissertation work set by the author originate from the solution of the assigned tasks and I define those with a deep scientifically applied and innovative character, especially in the part that includes US- guidance in regional technique as a gold standard in pediatric patients.

Presented publications and personal contributions of the Ph. D. student:

Four publications are presented and in all four of them the Ph. D. student is a leading author. This determines the personal contributions of the Ph. D. student

in the research with personal author merits regarding results, contributions and achievements.

CONCLUSION:

The presented for opinion and Position dissertation work „**APPLICATION OF POPLITEAL NERVE BLOCK IN LOWER LEG INJURIES IN PEDIATRIC PATIENTS**“ contains significant scientific results and contributions on current and suitable for dissertation scientific issue. The presented materials and dissertation results completely correspond to the requirements, set in the Legal requirements of dissertation for the acquisition of educational and scientific degree "Doctor" and with the Regulations for development of the academic committee of UMHATEM "N.I.Pirogov"- Sofia. On these grounds, I give a positive valuation and recommendation to the honorable scientific jury to award Dr. Elena Toncheva Ivanova the scientific and educational degree „doctor“.

14.10.2022

Prof. Stoyan Milanov, M.D., Ph.D.