Opinion

by Prof. Atanas Temelkov, M.D., Ph.D.
on the dissertation titled

"**POTENTIATING ADJUVANT TECHNIQUE IN PERIPHERAL NERVE BLOCKS OF THE UPPER LIMB**"

For the award of the scientific and educational degree "Doctor"
Author of the dissertation: Dr. Dimcho Georgiev Genjdzhiev
Scientific supervisor: Prof. Dr. Stoyan Milanov, M.D.

Dr. Dimcho Georgiev Gendzheliev was born on 10.07.1988. In 2013, he graduated in medicine from the Medical University – Sofia. Since 2013, he has been enrolled in a specialization in Anesthesiology and Intensive Care at the Medical University Sofia. In 2019, he obtained the specialty in Anesthesiology and Intensive Care.
Since 2013, he has worked as a medical resident and assistant in the Department of Anesthesiology and Intensive Care at the University Hospital for Emergency Medicine "N.I. Pirogov."

The dissertation of Dr. Dimcho Georgiev Gendzheliev is written on 123 standard typewritten pages. Of these, 41 pages are a literature review, 23 pages describe the material and methodology, and 39 pages are dedicated to original research, results, discussion, and conclusions.
The topic "Potentiating adjuvant technique in peripheral nerve blocks of the upper limb" is contemporary and highly relevant. This correlates with current trends for increasing the number of patients undergoing outpatient surgery, an increased number of upper limb surgeries, and current trends for shorter hospital stays.
The dissertation is structured traditionally: literature review, objectives, tasks, material and methods, clinical methods, results and discussion, summary, conclusions, scientific contributions, and bibliography.
The literature review shows that the author has thoroughly examined the literature on this problem. It is presented on 41 pages. The conclusions drawn are clearly and accurately formulated.
Dr. Genjdzhiev correctly and accurately analyzes various authors' opinions on these issues, pointing out directions for proper assessment and future development. The different types of medications used as adjuvants in performing peripheral nerve blocks of the upper limb are also specified.
The bibliography includes 160 titles, many of which were published in the last 5 years.
The objectives and tasks of the dissertation are precisely and clearly defined, and the methods for achieving them are also stated.

The research methods applied by the author are modern. This is supported by both their type and their qualitative characteristics.
The clinical cohort includes 200 patients who underwent surgical interventions during the period from 2020 to 2023. After applying inclusion and exclusion criteria, the main patient group was formed.
In 40 patients, a brachial plexus block was performed using a pure local anesthetic, forming the control group.
In 160 patients, a brachial plexus block was performed with a local anesthetic and an added adjuvant—four different medications, which define four new subgroups.

Results and Discussion:
This section covers 39 pages. The results are presented according to the set tasks.
The study covers 200 patients who underwent brachial plexus blocks. These patients are aged from 18 to 82, with an average age of around 50 years.
The results are divided into demographic, intraoperative, and postoperative categories.
The demographic results—gender, age, ASA status, location of the process, and type of surgical intervention—do not show any statistically significant differences.
Intraoperative indicators—type of peripheral block used, time to perform the various types of peripheral nerve block, intraoperative parameters related to anesthesia, onset of motor and sensory block, inclusion of continuous intraoperative sedation—are correctly applied, interpreted, and presented for each group of patients.
Postoperative parameters—duration of sensory and motor block, need for additional analgesia within 24 hours after surgery, postoperative complications related to anesthesia—are clearly and accurately presented and determine the discussion and conclusions.
The dissertation of Dr. Gendzheliev presents the advantages of the potentiating adjuvant technique, and based on the results obtained, a protocol for planning and performing anesthesia for surgical interventions on the upper limb has been created, which aligns with the current trends in regional anesthesia for upper limb surgical interventions.

I agree with the conclusions and contributions made by Dr. Gendzheliev, and they can be used by anesthesiologist colleagues in their daily practice and in other areas of the specialty.
The dissertation of Dr. Dimcho Gendzheliev is dedicated to a contemporary and relevant topic, is correctly structured, the chosen goals and tasks are fulfilled, and the selected patient cohort corresponds to these tasks. The contributions are substantial and easily applicable in daily clinical practice.

The use of adjuvant techniques in peripheral nerve blocks for surgical interventions on the upper limb is an important issue, which has rarely been addressed and discussed in the anesthesiological community. Dr. Gendzheliev's dissertation "Potentiating Adjuvant Technique in Peripheral Blocks of the Upper Limb" fills a gap in the field of anesthesiology and intensive care. This provides me with full grounds to propose to the esteemed scientific jury to award the scientific and educational degree "Doctor" to Dr. Dimcho Georgiev Gendzheliev.

09.12.2024
Respectfully,
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Prof. At. Temelkov, M.D., Ph.D.