

EXPERT OPINION

On PhD thesis

For obtaining the educational and scientific degree "Doctor" in the field of higher education 7. Healthcare and sports, professional field 7.1. Medicine, scientific specialty "Neurology"

Of RADINA SVETLOZAROVA FUCHIDZHIEVA, MD

On the topic:

"PROGNOSTIC MARKERS FOR RECOVERY OF APHASIA AFTER ACUTE ISCHEMIC STROKE"

Scientific supervisor:

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The scientific opinion was prepared in accordance with Order № P-109-485/18.11.2021 of the Rector of Medical University, Varna. The presented materials on the procedure meet the requirements of the Law for development of the academic staff in the Republic of Bulgaria and the Regulations for development of the academic staff in Prof. Dr. Paraskev Stoyanov Medical University.

Dr. Radina Svetlozarova Fuchidjieva graduated in Medicine from Prof. Dr. Paraskev Stoyanov Medical University, Varna in 2014. Since November 2, 2015 she has been specializing in "Nervous Diseases" in the Second Neurological Clinic with a Department for treatment of acute strokes and a Department for intensive treatment of neurological diseases at the University Hospital "St. Marina", Varna. Since March 2017 she has been a full-time assistant at the Department of Nervous Diseases and Neurosciences at Prof. Dr. Paraskev Stoyanov Medical University, Varna. Dr. R. Fuchidjieva is a PhD student at the Department of Nervous Diseases and Neurosciences at Prof. Dr. P. Stoyanov Medical University, Varna. She was dismissed with the right to defend her dissertation on November 18, 2021.

The importance and relevance of the developed topic is significant due to the high frequency, severity, residual symptoms and social consequences of ischemic stroke. Communication is essential for everyday life. Aphasia affects many aspects of the patient's life - from personal relationships, through professional realization to economic well-being. Disappointment about communication difficulties, along with other impairments, leads to anxiety and depression. Aphasia severely disables the affected person. Rehabilitation and recovery of the patient is

very difficult. All this determines the significance of the dissertation in national and international aspect.

Main characteristics of the dissertation, purpose, tasks, performed work with evaluation of the results and contributions: The dissertation is correctly structured on 156 pages. The main sections are presented in an appropriate volume - literature review (47 pages); material and methods (4 pages); own results (42 pages); discussion (7 pages); conclusion (4 pages); implication (1 page), contributions (1 page); appendices (11 pages). The used literature includes 291 sources – 12 in Cyrillic and 279 in Latin. The text is linguistically and stylistically correct, the specialized terminology corresponds to modern requirements. The work is richly illustrated with 55 figures and 3 tables. The figures are sufficient in number, informative, with a well-chosen design.

The author is fully acquainted with the written information on the topic, which is evident from the presented **literature review**. The most important Bulgarian and foreign publications are indicated and adequately interpreted.

The goal is actual and clearly stated. It is appropriately divided into two parts. In order to fulfill the presented goal, the PhD student sets six tasks subordinated to the essence of the goal, aimed at full development of the dissertation topic. The tasks also include a description of the patients with stroke hospitalized in the Second Clinic of Nervous Diseases of the University Hospital "St. Marina"- Varna for the period 2020-2021.

The dissertation includes 67 patients divided into two groups - 17 treated with thrombolysis and 50 patients with ischemic stroke on standard treatment without thrombolysis. All patients were hospitalized in the Second Clinic of Nervous Diseases and the Department of Intensive Care of Neurological Diseases at the University Hospital "St. Marina", Varna for the period January 2020 - July 2021. The selection of cases is made according to appropriate and strictly observed inclusion and exclusion criteria.

The PhD student used modern research **methods** in his work and in particular neuroimaging of the brain with CT or MRI. Internationally established rating scales presented as appendices were applied. A 4-page questionnaire was developed (Appendix 5) for the socio-demographic characteristics, the presence of risk factors accompanying diseases, conservative treatment, etc. The obtained data were statistically processed with the main modern methods.

The author's own results are analyzed and interpreted correctly. Where possible and necessary, comparisons have been made with data from foreign authors without bias. I accept and maintain **the conclusions and contributions** pointed out by the author with original and

confirmatory character. Expressing a positive opinion, I would like to point out conclusion №6, which presents eight characteristics related to the favorable recovery of aphasia. The dissertation research provides rich information of theoretical and applied nature, which is important for the enrichment of medical practice in patients with ischemic stroke. The PhD student has shown abilities to discover current issues, to organize, implement and interpret research. The work is especially useful for the adequate assessment and response of aphasic disorders in patients with ischemic stroke. The dissertation provides an opportunity to optimize efforts for maximum improvement of patients.

The abstract of the dissertation, presented on 60 pages, fully meets the requirements. All parts are included in an abbreviated form. It objectively reflects the formulation of scientific elaboration, research methods, results and analysis.

Three scientific articles related to the dissertation have been published. There are also 6 scientific reports on the topic. Report number 3 does not correspond to the topic of the dissertation and I do not accept it. The articles and the other reports fully present the dissertation under consideration to the relevant scientific and professional community in the country and abroad.

I have no **critical remarks** regarding the goal, methodologies, patient groups and own results. Spelling and technical errors are acceptable. The highlighted critical remark regarding the report №3 does not violate the qualities of the dissertation.

CONCLUSION: The dissertation of Dr. Radina Svetlozarova Fuchidzhieva is up-to-date, innovative and is the first study in our country of prognostic markers for restoring aphasia in patients after ischemic stroke until the end of the third month after the vascular accident onset. The dissertation includes original and confirmatory scientific contributions of real significance for the practice. They are a personal work of the PhD student. The criteria and requirements of Prof. Dr. P. Stoyanov Medical University - Varna for obtaining the educational and scientific degree "Doctor " and the norms of the relevant law and regulations have been met. No evidence of plagiarism has been established. All this is a reason to give a positive opinion and convincingly propose to the esteemed members of the Scientific Jury to award Dr. Radina Svetlozarova Fuchidzhieva the educational and scientific degree "Doctor" in the field of higher education 7. Health and Sports, professional field 7.1 Medicine, scientific specialty "Neurology".

28 Jan 2022

(Assoc. Prof. Boyko Stamenov, MD, PhD)