

Review

from

Prof. Dimitar Bogdanov Maslarov, MD, PhD, DSc

Chairman Neurology Clinic,

University First MHAT "St. Joan Krastitel"- Sofia

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Medical College "Yordanka Filaretova" - Sofia

for dissertation on the topic:

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

for awarding with educational-scientific degree "Doctor" in the field of 7. Health and sports,
professional field 7.1. Medicine and scientific specialty "Neurology",

of Dr. Radina Svetlozarova Fuchidzhieva, full-time PhD student in the doctoral program
"Neurology" (03.01.19) professional field 7.1. Medicine, enrolled by order № P-109-255 / 01.
08. 2019 at the Medical University "Prof. Dr. Paraskev Stoyanov "- Varna with supervisor: Prof.
Silva Peteva Andonova-Atanasova, MD, DSc

By decision of the Chairman of the Scientific Jury and according to the Order of the Rector of
MU-Varna № P-109-485 / 18.11.2021 I was appointed as an external member of the Scientific
Jury to present this review.

The review was prepared in accordance with the Academic Staff Development Act, the
Regulations for the Implementation of the Academic Staff Development Act and the Regulations
on the terms and conditions for obtaining scientific degrees and holding academic positions at
the Medical University "Prof. Dr. Paraskev Stoyanov "- Varna.

Education and career development

Dr. Radina Svetlozarova Fuchidzhieva was born in 1989 in Varna. She graduated high school SOUEE „St. Constantine-Cyril the Philosopher“ in Ruse with a profile in English and Russian language. She graduated “Medicine” in 2014 at Medical University "Prof. Dr. Paraskev Stoyanov". After graduation she stated working in the Department of General and Vascular Neurology at the UMHAT - Ruse.

Dr. Radina Fuchidzhieva started working in Second Clinic of Nervous Diseases with a department for intensive care of neurological diseases at UMHAT “Sveta Marina” from 2015. In March 2017 after a contest she was appointed a full-time assistant at the Department of Nervous Diseases and Neurosciences. She conducts exercises in nervous diseases for medical and dental students - English language training, midwives and nurses.

In 2019 after a contest she was enrolled as a full-time doctoral student at the Department of Nervous Diseases and Neurosciences, with topic of the dissertation "Prognostic markers for recovery of aphasia after acute ischemic stroke".

In July 2020 Dr. Fuchidzhieva acquires the specialty "Nervous Diseases". She has started training in "Electroencephalography" at December 2021.

She is a member of the Bulgarian Medical Union, Bulgarian Society of Neurology, Member of the Quality Committee at the Faculty of Medicine at MU - Varna.

Dr. Radina Fuchidzhieva interests are in the field of intensive care of neurological diseases, epilepsy, demyelinating and inflammatory diseases of the nervous system. She regularly takes an active part in international, national and regional congresses, symposia and forums. In 2016 participates in the international project ESO-EAST SUNEP, with targeted training of nurses to work in stroke units. She conducted the training "Healthy Lifestyle and Stroke Prevention" in Dubrovnik, Croatia in 2017. She has participated in several international meetings of SITS, SAFE, ANGELS.

She speaks English and Russian languages.

Relevance of the dissertation

The work submitted to me for review is structured according to the standards in our country for a dissertation for the educational-scientific degree "Doctor".

The dissertation is written on 156 standard pages, structured as follows: introduction - 2 pages, literature review - 47 pages, purpose, tasks and hypotheses - 2 pages, material and methods - 4 pages, results - 39 pages, discussion - 7 pages, conclusion - 6 pages, conclusion remarks - 1 page, contributions - 1 page, bibliography - 28 pages, appendices - 11 pages and list of publications related to the dissertation - 1 page. The dissertation has 3 tables, 55 figures and 5 applications. The bibliography contains 291 literary sources, of which 12 in Cyrillic and 279 in Latin.

Literature review

The literature review describes the risk factors for ischemic stroke and associated aphasia, prevalence, classification, recovery factors, rating scales and treatment methods for ischemic stroke, and quality of life in patients with aphasia. The information presented by Dr. Fuchidzhieva on the recovery of aphasia in patients with acute ischemic stroke is up-to-date, comprehensive and significant. The literature review ends with conclusions that support the need to study aphasia after acute ischemic stroke and its follow-up in dynamics. The issues and content of the work are debatable and are of interest not only to neurologists, but also to a wider range of specialists in the field of neurorehabilitation, speech therapy and psychiatry.

Purpose, tasks and hypothesis

The aims of the dissertation are two:

1. Comparative study of aphatic disorders in patients with acute ischemic stroke treated with or without intravenous thrombolysis.
2. Determination of prognostic markers for recovery of aphasia in both groups.

Six tasks have been defined to achieve the set goals.

The hypotheses are correctly formulated on the basis of the set goals and objectives.

Material and methods

The study includes 67 patients - 17 patients with ischemic stroke who underwent intravenous thrombolysis (clinical group) and 50 patients with ischemic stroke without thrombolysis (control group). To fulfill the objectives of the study, clinical and neuroimaging methods, specific scales: NIHSS, ART, AHS, ASPECTS, as well as a survey (Appendix 5) were applied.

Modern statistical methods have been used to analyze the obtained data.

The results are illustrated comprehensively in 3 tables and 55 figures with a detailed description of the studied parameters. They are grouped into 6 sections, reflecting the demographic and clinical characteristics of the subjects, monitoring the dynamics of the recovery of aphasia among patients treated with intravenous thrombolysis and those treated with conservative therapy, the established correlations between socio-demographic, clinical and neuroimaging as well as the patient's profile of disease outcome. The results include a comprehensive study of 67 patients all with acute ischemic stroke in the left cerebellar artery, hospitalized in the First and Second Clinic of Nervous Diseases at the University Hospital "St. Marina" - Varna for the period 01.2020-07.2021. The correlations with some clinical, neuroimaging and socio-demographic indicators (according to the questionnaire) were analyzed, followed at the third month from the onset of the disease. Risk factors for ischemic stroke and aphasia have been identified and the important role of intravenous thrombolysis in motor and speech recovery has been confirmed.

Results and Discussion

The results show the importance of aphasia after ischemic stroke. The established correlations can be used in the early assessment of the severity and prognosis of the outcome of the disease, as well as to optimize therapeutic approaches in patients with acute hemispheric ischemic stroke. There was a significant difference in terms of age and sex among the studied contingent, as in women the stroke occurred at a much later age, and males have a 1.58 times higher risk of thrombotic stroke. The presence of chronic vertebro-basilar insufficiency has 6.6 times higher risk of developing ischemic stroke.

Conclusions and contributions

I agree with the conclusions made by Dr. Fuchidzhieva. The seven contributions are of an original and confirmatory character.

- **With original character:**

1. For the first time in our country a detailed analysis of the literature is made on the role of treatment with intravenous thrombolysis in patients with ischemic stroke in the left middle cerebral artery and the recovery of aphasia
2. For the first time in Bulgaria has been followed the degree of recovery of motor deficit and aphasia in patients with ischemic stroke at the third month from the onset of the disease
3. For the first time in our country a comparative analysis of the degree of recovery of motor deficit and aphasia was performed in patients with intravenous thrombolysis and in those without specific treatment.

- **With confirmatory character:**

1. The risk factors that could influence the outcome of thrombolytic treatment in relation to the recovery of aphasia have been identified
2. A patient profile has been determined for favorable recovery of aphasia during treatment with intravenous thrombolysis among patients with ischemic stroke
3. A profile of the patient with risk factors predisposing to more severe aphasia among patients with ischemic stroke has been determined
4. The role of the ART, AHS, ASPECT and NIHSS scales has been proven to be reliable tools for assessing aphasia and the prognosis of treatment with intravenous thrombolysis

Dr. Fuchidzhieva has published three scientific publications on the topic of the dissertation, in 2 of which she is the first author. There are also 6 scientific presentations (posters), of which 3 at national congresses and 3 at international ones. The publications are from the period 2019 - 2021. The scientific activity during the period of preparation of the dissertation is in compliance with the normative requirements. No citation data provided.

Conclusion

The dissertation presented for review is the author's own development, which is characterized by originality, comprehensiveness and precision. The results are of a contributing nature to practical neurology. Dr. Radina Fuchidzhieva has the necessary theoretical knowledge and professional skills in neurology, as well as the ability to independently conduct research.

Based on the above, I give my positive assessment of the dissertation and invite members of the esteemed Scientific Jury to vote positively for awarding with educational and scientific degree "Doctor" of Dr. Radina Svetlozarova Fuchidzhieva - full-time doctoral student at the Department of Nervous Diseases and neurosciences at the Faculty of Medicine at the Medical University of Varna.

25. 01. 2022 г.

Sofia

Reviewer:

Prof. Dimitar Maslarov, MD, PhD, DSc

