

REVIEW

From Assoc. Prof. Dr. Kiril Svetoslavov Nenov, Ph.D.

of the dissertation for scientific degree "Doctor" of Dr. Diana Dimcheva Nenova

TOPIC: ADEQUACY OF DIALYSIS TREATMENT AND THE RELATIONSHIP WITH ACHIEVED QUALITY OF LIFE AND SURVIVAL IN PATIENTS WITH STAGE V CHRONIC KIDNEY DISEASE

Scientific Supervisor: Assoc. Prof. Dr. Alexandar Stoyanov, Ph.D.

On 09.03.2022 by Order of the Rector of MU "Prof. Dr P. Stoyanov" Varna № R-109-105, I have been elected a member of the Scientific Jury, voted by the Faculty Council of Medicine (Minutes №61 / 01.03.2022)

The aim of the jury is to acquire the educational and scientific degree "Doctor" in the field of higher education

7.0 Health and Sports

7.1 Medicine and specialty "Nephrology"

After discussion, the dissertation is scheduled for defense on the Department Council of the Second Department of Internal Medicine of MU "Prof. Dr P. Stoyanov" Varna.

BIOGRAPHICAL DATA of Dr. Diana Dimcheva Nenova:

Dr. Diana Dimcheva Nenova was born in 1987. She graduated from high school in Karnobat with honors in 2006. In 2012 she graduated with honors in medicine from the Medical University "Prof. Dr. Paraskev Stoyanov" Varna. In February 2013 she started as a resident at the Clinic of Dialysis at the University Hospital "St. Marina" EAD-Varna. In 2017 she was selected as a part-time assistant in nephrology, and from March 2018 she is an assistant professor of nephrology at the Second Department of Internal Medicine at the Medical University "Prof. Dr. Paraskev Stoyanov" Varna. In 2018 she successfully acquired a degree in nephrology. She has conducted a specialized course on vascular access and puncture kidney biopsy.

Analysis of the dissertation:

The dissertation contains 200 standard typewritten pages and is illustrated with 43 figures, 24 tables and 1 appendix.

The literature review includes 379 sources, 10 of which are in Cyrillic. The articles are mostly from the last 4 years, which proves the relevance of the topic.

The markers for dialysis adequacy and protein balance are discussed in detail. A correlation was sought between the duration of dialysis treatment and anemic syndrome, nutritional status and

life expectancy. The different variants of urea - kinetic modeling are better considered. A connection was sought between the different types of vascular access and the quality of life of patients on hemodialysis. At the end of the literature review, some contradictions and perspectives are summarized. The main hypothesis is that longer dialysis and high dialysis dose leads to better quality of life, survival and clinical outcomes.

PURPOSE of the dissertation:

Study of the effect of the non-standardized high dialysis dose $spKt > 1.5$, obtained by different dialysis techniques - conventional and convective, on the clinical outcome and determining its significance for survival and quality of life in patients with end-stage chronic kidney disease.

The dissertation student has formulated 9 main tasks.

The most important tasks are: to determine whether there is a relationship between quality of life at different doses of dialysis; nutritional status; levels of anemia; blood flow.

A link was sought between the use of different dialysis membranes as an indicator of treatment effectiveness. An treatment algorithm has been developed to increase survival and improve quality of life.

A total of 100 dialysis patients were tracked. The effect of convective therapy on nutritional status, anemic syndrome and dialysis dose was studied in 41 patients. In another 87 patients, the importance of vascular access on the adequacy of dialysis treatment was monitored. In another 32 patients, the relationship between the adequacy of dialysis results in online monitoring and UKM was sought. A change in quality of life was found in 50 patients.

Dr. Nenova described in detail the treatment and laboratory methods used in the studied patients. The obtained results were processed by 8 statistical methods. Each of the chapters ends with a summary and discussion of the results obtained.

The dissertation student has established 12 conclusions. The most significant of these is: ionic dialysate is a new non-invasive tool that demonstrates the effectiveness of dialysis treatment. Another important conclusion is: increased dialysis dose significantly improves quality of life, nutritional status and anemia. There is a better effect of long-term dialysis in young and middle-aged patients, and weak in adults. Significant practical value is achieved in patients with arteriovenous fistula. The dissertation student accepts that this vascular access is superior to the other methods used.

Dr. Nenova establishes theoretical and practical contributions. I give more weight to contributions of practical value. Different dialysis techniques lead to different survival and the need for hospitalization.

The abstract is written in a clear and scientific style and language and is very well illustrated.

The dissertation presents 4 publications related to the dissertation.

IN CONCLUSION

The dissertation is of practical and theoretical importance. The established scientific contributions are for the first time in Bulgaria.

The dissertation is written in clear and precise language in a good scientific style.

CONCLUSION

ON THE BASIS OF THE DATA, I ACCEPT THAT THE DISSERTATION WORK OF DR. DIANA DIMCHEVA NENOVA MEETS ALL REQUIREMENTS FOR THE AWARD OF ONS "DOCTOR". I VOTE POSITIVELY AND I PROPOSE THE REMAINING MEMBERS OF THE SCIENTIFIC JURY TO VOTE POSITIVELY.

15.03.2022

Assoc. Prof. Dr. Kiril Nenov, Ph.D.

