

REVIEW

The dissertation for the award of the educational and scientific degree "DOCTOR"

on

Dr. Martina Todorova Yaneva

on the topic: **"Etiopatogenetic factors in nummular eczema"**

Scientific supervisor: Prof. Dr. Razvigor Durlenski, MD

Reviewer: Prof. Dr. Zdravka Demerdjieva, MD,

Brief biographical data

Dr. Martina Todorova Yaneva was born on September 25, 1992 in the city of Veliko Tarnovo. She completed her higher education at the Medical University - Sofia, in 2018 she acquired the educational and qualification degree "Master" in medicine.

In 2023, he successfully completed a specialization in Skin and Venereological Diseases at the Clinic of Skin and Venereological Diseases at Acibadem City Clinic, University Hospital "Tokuda" - Sofia, acquiring a specialty in dermatology and venereology.

In 2024, Dr. Yaneva also obtained an additional master's degree in "Public Health and Health Management".

Her professional path is connected with active clinical practice in the field of dermatology.

Dr. Yaneva demonstrates a strong scientific activity. She is the author and co-author of numerous scientific publications in Bulgarian and international journals, on topics such as atopic dermatitis, contact hypersensitivity, drug-induced skin reactions and nummular eczema.

He actively participates in national and international scientific forums, including congresses of the European Academy of Dermatology and Venereology, the American Academy of Dermatology (AAD), the European Academy of Allergy and Clinical Immunology, where he presents his results from scientific activities in posters.

Her professional development is complemented by participation in a number of trainings in the field of dermatology, specialized courses in dermatology, dermatology and dermatosurgery, organized by leading international organizations.

Dr. Yaneva is fluent in several foreign languages, including English and French at level C1, German at level B2, and Spanish at level B1, which allows her to actively participate in the international scientific community.

She is a member of many professional organizations, including the Bulgarian Dermatological Society (BDS), the European Academy of Dermatology and Venereology (EADV), the European Academy of Allergy and Clinical Immunology (EAACI), the World Allergy Organization (WAO) and the International Dermatology Society.

All of this data outlines the profile of a young but already established specialist with active scientific and clinical activities.

Topic relevance

The dissertation is dedicated to an extremely topical and still insufficiently understood problem in modern dermatology - the etiopathogenesis of nummular eczema.

Of great importance is the fact that the disease leads to a significant deterioration in the quality of life of patients, both due to chronic itching and due to social and psychological consequences.

Against this background, the study of the multifactorial genesis of the disease, including the role of atopy, contact sensitization, microbiological factors and skin barrier disorders, is essential both from a scientific point of view and for clinical practice.

Structure and scope of the dissertation

The dissertation is 160 pages long and is structured according to the established academic requirements.

The following sections are included - introduction, literature review, formulation of goal and objectives, materials and methods, results, discussion, conclusions, contributions, as well as bibliography and appendices.

The bibliography contains a total of 184 sources.

The literature review covers a wide range of scientific publications, with the bibliography including a significant number of sources, mainly in Latin, which indicates a good orientation in international scientific literature.

Scientific validity and knowledge of the topic

The doctoral student demonstrates in-depth knowledge of the topic. The literature review examines the main etiopathogenetic factors, such as atopy and its relationship with nummular eczema, drug-induced dermatoses, contact hypersensitivity, skin xerosis, bacterial colonization, vascular and trophic disorders, as well as neuroimmunological mechanisms.

The role of contact allergy and its frequency in patients with nummular eczema is well established, as is the possibility of drug-induced variants of the disease.

Materials, methodology and results

The dissertation is based on an observational, cross-sectional clinical study conducted at the Clinic of Skin and Venereological Diseases at the

Acibadem City Clinic, Tokuda University Hospital, Sofia. The study included 184 patients - 84 with clinically diagnosed nummular eczema and 100 patients with other types of dermatitis in which a standardized clinical, allergological and paraclinical evaluation has been performed.

A detailed assessment of the skin status was performed, analyzing the localization, morphology, and distribution of the lesions.

To objectify the severity of the disease, a rating scale was introduced and implemented, allowing quantitative analysis and comparability of the results. In parallel, patient-oriented indicators (PROs) were assessed, such as itching, sleep disturbance and skin dryness measured by a visual-numeric scale (VNS), and quality of life - by a validated 10-item questionnaire.

The allergy assessment included patch testing with a standard series of allergens, and the results were compared with control groups of patients with other forms of dermatitis. Additionally, the role of bacterial antigens was analyzed by performing intradermal *in vivo* skin tests, which is an innovative approach in the context of the disease.

Statistical processing of the data was carried out by applying methods of descriptive and analytical statistics. The χ^2 -test was used for assessment of dependence between categorical variables, correlation analyses (Spearman) to establish relationships between quantitative indicators, as well as methods for assessing statistical significance at the level $p < 0.05$. The data were processed with specialized statistical software, which guarantees the reliability of the results obtained.

The analysis of contact sensitization shows a significant proportion of positive patch tests, and the results obtained correspond to published data on the frequency of contact allergy in patients with nummular eczema. A statistically significant relationship is observed between the presence of sensitization and the chronic course of the disease.

The results of intradermal tests support the role of bacterial antigens as a potential trigger in pathogenesis, reporting an association between positive tests and more severe clinical presentation.

In summary, the methodology used is reliable, valid and consistent with the set goals and objectives. The results obtained are statistically justified and contribute to a better understanding of the etiopathogenetic mechanisms in nummular eczema, having the potential for direct application in clinical practice.

Scientific and practical contributions

The dissertation contains original scientific and practical contributions with well-defined clinical focus.

The main contribution should be the complex analysis of the etiopathogenetic factors in nummular eczema, as for the first time within a Bulgarian population the role of contact hypersensitivity, bacterial antigens and skin barrier disorders is simultaneously investigated.

A significant contribution is the introduction and application of the MESI (Nummular Eczema Severity Index) scale for assessing the severity of the disease, which provides an objectified and reproducible method for quantitative assessment and monitoring in clinical practice.

A contribution is also the systematic study of patient-oriented indicators (PRO), including - assessment of itching, sleep disturbance and quality of life using a visual-numeric scale and a validated questionnaire, as a correlation between subjective symptoms and clinical severity was established.

A significant incidence of contact sensitization has been demonstrated through epicutaneous testing, which justifies the need for routine application of patch tests in patients with nummular eczema.

As an original element, the application of intradermal *in vivo* tests to assess the role of bacterial antigens should also be noted, which complements the existing data on the participation of microbiological factors in the pathogenesis of the disease.

In practical terms, the results create a basis for an individualized diagnostic and therapeutic approach, including assessment of the allergic status, control of microbiological factors, and restoration of the skin barrier.

Publications and academic activity

The doctoral student presents five publications on the topic of the dissertation, being first author in all of them, including an article with an impact factor.

He actively participates in scientific forums.

Conclusion

The dissertation work of Dr. Martina Todorova Yaneva on the topic "Etiopathogenetic factors in nummular eczema", with scientific supervisor Prof. Razvigor Durlenski, is correctly and accurately completed with well-set goals and objectives. The dissertation uses current diagnostic methods, and the results are interpreted with credibility.

I believe that the work meets the requirements of the Academic Staff Development Act and shows excellent theoretical preparation and practical potential.

I confidently recommend to the esteemed members of the scientific jury to give their positive assessment and I propose to Dr. Martina Todorova Yaneva to be awarded the educational and scientific degree "DOCTOR".

Sofia,

11.05.2026



Prof. Dr. Zdravka Demerdzhieva