

STATEMENT

by

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Department of Periodontology and Diseases of the Oral Mucosa, FDM, MU – Plovdiv

Appointed a member of a Scientific Jury by Order No P-109-102/07.03.2022 under the procedure for acquiring educational and scientific degree “**Doctor**” in professional field 7.2. *Dental Medicine in “Paediatric Dentistry”* PhD programme

Author: *GERGANA TRIFONOVA TRIFONOVA*

Form of PhD studies: Self-Study

Department: Paediatric Dental Medicine, FDM at MU– Varna

Topic: *ASSESSMENT OF ORAL HEALTH STATUS IN CHILDREN WITH MALIGNANT DISEASES UNDERGOING CHEMOTHERAPY*

Supervisor:

PROF. DR. RADOSVETA S. ANDREEVA-BORISOVA, DSC

1. General Presentation of the Procedure and the PhD Student

The review of the documents shows that the procedure for finalising the doctoral programme and the procedure for announcing the defence have been complied with, the documents have been prepared in accordance with the requirements of the Act on Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations on the terms and conditions for acquiring scientific degrees and holding academic positions at Medical University – Varna. The PhD student has attached the required **three** full-text publications.

2. Biographical Data of the PhD Student

Dr. GERGANA TRIFONOVA TRIFONOVA graduated from FDM of Medical University –Plovdiv in 2006, acquiring a Master’s Degree “Doctor in Dental Medicine”. She has been working as an Assistant Professor at the Department of Paediatric Dental Medicine at MU–Varna since 2010. In 2018 she was enrolled as a full-time PhD student at the same Department. In relation to the doctoral thesis, the candidate has published **three full-text scientific articles**, being the first author of the articles.

3. Relevance of the Subject and Significance of the Goals and Objectives Set

The relevance of the problem developed in the dissertation, in research and applied terms, is high. Oral complications related to oncological therapy in paediatric patients are primarily a serious medical problem. Acute oral complications occur five-seven days after the beginning of each chemotherapy and correspond to changes in the blood count. Oral mucositis is the most common and most serious complication of oral chemotherapy, which is well known to oncologists, but not to dental practitioners, who should consult and treat patients symptomatically at this critical moment. Another serious problem is oral opportunistic infections, neuropathic pain in the maxillofacial area, various cheilites, etc. All these complications can seriously affect the quality of life of patients and may appear to be an additional factor for complicating and worsening the clinical picture. In this context, the lack of algorithms to maintain optimal oral health of children with malignant diseases in our country is a serious omission that justifies the main purpose of the thesis presented.

4. Knowledge of the Problem

The literature review of the dissertation is informative and consistently examines the epidemiology of malignancies in childhood and their clinical characteristics. A separate chapter is devoted to oral changes in children with leukaemia. The effects on the oral mucosa and periodontium have been considered. The methods of modern diagnosis of oral diseases in children with malignancies and the clinical evaluation of oral changes in paediatric patients undergoing chemotherapy have been discussed. The last chapter deals with prevention of oral diseases in children in the context of chemotherapy.

It can be concluded that Dr. Trifonova has thoroughly studied the topic. Although there is no summary analysis at the end of the literature review, it is clear from the presentation that the most important problem is the lack of algorithms to maintain optimal oral health of children with malignancies in our country. This fact organically connects the review with the goal and tasks formulated by the doctoral student.

5. Methodology of the Study

The objective is clearly defined, and the six tasks for its solution are logically and exhaustively selected. A sufficient volume of clinical specimen (50 paediatric leukaemia patients undergoing chemotherapy, 50 healthy children and 60 dental practitioners) has been used to resolve them. Patients were recruited from the Clinic of Paediatric Clinical Haematology and Oncology at UM-HAT "St. Marina" – Varna. The selection of participants is subject to well-defined criteria. In the first task, the PhD student aims to study adverse effects of malignancies and chemotherapy on the oral health of children between the ages of two and 18 years. Task No 2 provides a complex assessment of the oral health status (oral mucosa, dental structures, gingiva and periodontium) of children with malignancies before treatment and in the course of chemotherapy. The third task compares oral health in children without and with malignant diseases. Task No 4 examines the impact of the malignant disease on the individual quality of life of children. The fifth task is addressed to dental practitioners, providing, by means of a survey, an assessment of the awareness of paediatric dental doctors of malignancy in childhood. The last task analyses the therapeutic and prophylactic algorithms to maintain good oral health of children with malignant diseases.

The methods and schedule of the studies are described in detail. The statistical methods applied have been correctly selected, which is a prerequisite for the validity of the conclusions drawn.

6. Characteristics and Evaluation of the Dissertation

The dissertation is written on 158 standard pages and is illustrated by six tables, 52 figures, six photos and four annexes. The literature reference list includes 169 literature sources, of which eight in Cyrillic and 161 in Latin.

The dissertation begins with a literature review of the problem, which is well-formed, informative and consistently examines the relationship between oncological diseases in childhood and their therapy and oral health. The review clearly highlights the most important issue, namely the lack of specific algorithms for maintaining optimal oral health of children with malignant diseases in Bulgaria. This fact organically connects the review with the goal and tasks formulated by the doctoral student.

After formulating the purpose and the six tasks, the PhD student consistently sets out the materials and methods used in the dissertation.

The results of clinical and survey studies obtained in carrying out the tasks are correctly described and accompanied by well-structured tables and figures (part of which are photographic material).

I believe that, throughout the development of the thesis, sufficiently substantial results have been obtained, the nature of which can be defined as enrichment of the existing knowledge of oral pathology in paediatric patients with oncological diseases and an argumentation of the need for an interdisciplinary approach to their treatment. The discussion of the results is of a synthetic nature and reveals the logical link between them. A comparison has been made between own research data and similar results found in literature sources. The conclusions drawn are credible and largely reflect the contributions made by the thesis developed.

7. Contributions and Significance of the Thesis to Science and Practice

Four contributions of applied nature and two theoretical contributions have been formulated, which I partially accept (the contributions are national in nature and do not add new knowledge to the field of Oral Medicine). Among the most important contributions of the dissertation are the determination of the dental, oral-hygienic, periodontal, gingival and mucous status of the Bulgarian children with malignant diseases. The second important contribution of applied nature are the recommendations for dental treatment of children with oncological diseases before and after the initiation of chemotherapy, which includes a model of preventive care for children with oncological diseases, an algorithm for dental treatment, and a model for dental care in children with oncological diseases at the time of oncological therapy.

8. Evaluation of the Publications on the Dissertation

In connection with her thesis, Dr. G. Trifonova has published three full-text scientific articles. The first, published in *Izvestia Journal of the Union of Scientists – Varna*, examines the changes to the oral mucosa in children with malignant diseases. The second article, published in the same journal, focuses on the dental status of paediatric patients with oncological diseases. The third publication is in the *Journal of the Union of Scientists – Varna* and examines the prevalence and severity of gingivitis in healthy children and children with cancer. She is the first author in all three publications. Although the publications were created between 2017 and 2019, they have not been cited and their impact is yet to be assessed, but taking into account the relevance of the topic, I assume that they will still attract the attention of the specialists.

9. Personal Involvement of the PhD Student

The personal involvement of the doctoral student in the work, the results obtained and the formulated contributions are beyond doubt. I need to point out that although Dr. G. Trifonova has been working

at the Department of Paediatric Dental Medicine of FDM — Varna, part of the most scientifically significant contributions of the PhD student were obtained in collaboration with specialists in oncohematology, which proves the true interdisciplinary nature of the thesis and in particular, the ability of the PhD student to work in a team. The collaboration with a specialist in oncohematology further enriches the knowledge of the PhD student and contributes to both the completeness of the work and the competent understanding and interpretation of this complex issue.

10. Abstract

The abstract reflects in a synthesised form the structure and content of the thesis development.

11. Critical Remarks and Recommendations

As doctoral studies have time constraints that prevent patients from being monitored and analysed over a longer period of time, some conclusions may be corrected or enriched. In this sense, I recommend Dr. G. Trifonova to continue her observations on the same patients for a longer period of time and to provide information on the chronic effects of oncotherapy on oral health.

12. Recommendations for Future Application of Dissertation Contributions and Results

I am positive that PhD student G. Trifonova, who demonstrates in her dissertation good knowledge of this specific pathology, can and ought to continue her future research in this direction. I consider the proposed recommendations for dental treatment of children with cancer before and after chemotherapy to be the most important contribution of her work. It is desirable for these recommendations to be disseminated more widely, both among paediatric practitioners treating these patients and among health professionals in the field of paediatric oncology.

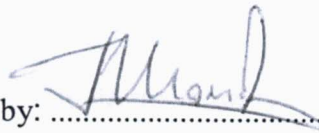
CONCLUSION

The dissertation thesis *contains scientific, research and applied results, which represent an original contribution to science* and **meets all the requirements** of the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for implementation of ADASRB and the relevant Regulations of MU – Varna. The presented materials and thesis results **fully** comply with the specific requirements of MU – Varna.

The dissertation shows that PhD student GERGANA TRIFONOVA TRIFONOVA **possesses** in-depth theoretical knowledge and professional skills, **demonstrating** qualities for independent scientific research.

Given the above, I confidently give my *positive assessment* of the research presented by the above reviewed dissertation, abstract, achieved results and contributions, and *I propose to the esteemed Scientific Jury to award the educational and scientific degree “Doctor”* to GERGANA TRIFONOVA TRIFONOVA in “Paediatric Dentistry” PhD programme.

20. 04. 2022

Reviewed by: 
Assoc. Prof. Dr. Georgi T. Tomov, PhD