

OPINION

by Prof. Dr. Ani Bozhidarova Belcheva, Ph.D.
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of dissertation for awarding the educational and scientific degree "Doctor"

Field of higher education 7. Health and sports

Professional field 7.2 Dental medicine

Doctoral program "Pediatric Dentistry"

Author: Dr. Gergana Trifonova Trifonova

Form of doctoral studies: independent preparation

Department: Pediatric Dentistry, FDM, MU-Varna

Topic: "Assessment of oral status in children with malignancies undergoing chemotherapy"

Scientific adviser: Prof. Dr. Radosveta Stoyanova Andreeva-Borisova, PhD, Dsc

General presentation of the procedure and the PhD student

As an external member of the Scientific Jury, I present an opinion for completed dissertation in pursuance of Article 32 of the Regulations for the implementation of Law on the Development of the Academic Staff of the Republic of Bulgaria, order № P-109-102 / 07.03.2022 of the Rector of MU-Varna and according to protocol № 1 / 18.03.2022 from the first meeting of the Scientific Jury.

Dr. Gergana Trifonova was born on January 19, 1982 in the city of Varna. In 2000 he began his studies at the FDM, Medical University - Plovdiv, graduated in 2006. She was appointed as a full-time assistant in the Department of Pediatric Dental Medicine, FDM of MU-Varna in 2010. He completed a master's degree in health management in 2015. Acquired a degree in pediatric dentistry in 2016. He speaks English and Russian. She was enrolled as a doctoral student in self-study, discharged on 07.03.2022 with the right to defense by order № P-109-102 / 07.03.2022 of the Rector of MU - Varna.

Topicality of the topic

Children with malignancies have specific pathologies in the field of general and dental health and need an individual, interdisciplinary approach when planning treatment.

Children in the various stages of cancer and treatment have a number of dental health problems that may result from untreated dental caries, periodontal disease and / or pathological lesions of the hard and soft tissues of the oral cavity. In addition, the presence of oral lesions as manifestations of cancer, the development of oral complications as a result of cancer therapies and long-term dental complications after the end of cancer therapy may be compounded. That is why a complex, medical approach is needed.

Dental specialists should be informed about the specifics of treatment in children with cancer and possible complications. Some gaps in the knowledge and skills of specialists to treat such children are a prerequisite for dental treatment to be postponed and carried out by a small circle of specialists. Interdisciplinary care guarantees patient comfort and effective results during and after cancer therapy.

I consider the choice of dissertation topic to be relevant and necessary.

Structure of the dissertation

The dissertation corresponds to the approved norms for dissertation in FDM, MU - Varna, in accordance with the requirements of Law on the Development of the Academic Staff

of the Republic of Bulgaria.

The total volume is 158 pages, of which, 6 tables, 52 figures, 6 photos and 4 appendices. The bibliography includes 169 literary sources, of which 8 in Cyrillic and 161 in Latin.

Knowledge of the problem

The literature review has a sufficient volume. The epidemiology and clinical characteristics of malignancies in general, some solid tumors and childhood leukemia are discussed. The clinical characteristics of dental changes in children with malignancies, modern diagnosis and treatment of dental diseases in children with some solid tumors or leukemia undergoing chemotherapy have been studied. The possibilities for prevention of complications are also considered.

The literature review is informative and comprehensive. Its structure provides summary information on knowledge in the field of clinical oncology and manifestations in the oral cavity, as well as complications after chemotherapy. The literature review ends with some unresolved issues on the topic in our country and focuses on the choice of goal and research objectives.

The doctoral student aims to analyze the clinical characteristics of oral changes in children with malignant diseases in the course of chemotherapy and to define optimal therapeutic and prophylactic regimens of complex medical and dental behavior in these children.

Defines 6 tasks for the implementation of the stated goal: 1) To study the adverse effects of malignancies and chemotherapy on the oral health of children aged two to 18 years; 2) To make a comprehensive assessment of the oral status (oral mucosa, dental structures, gingiva and periodontium) of children with malignancies before treatment and during chemotherapy; 3) To conduct a comparative assessment of oral health in children without and with malignant diseases; 4) To establish the impact of malignant disease on the individual quality of life of children; 5) To conduct a survey on the awareness of pediatric dentists about malignant diseases in childhood; 6) To analyze the treatment and prevention algorithms for maintaining good oral health of children with malignant diseases

The following hypothesis is allowed:

Children with malignancies have specific needs in the field of dental health and need an individual interdisciplinary approach when planning treatment.

Research methodology

The section "Material and methods" is described in the order of the tasks. The material includes 50 children aged 2-18 years and a control group of 50 healthy children. Methods for the individual tasks are described: clinical method - (assess dental status, risk of caries, oral hygiene of the group with disease and control group without disease and compare; sociological method (survey of dentists for their knowledge and capabilities for the treatment of children with cancer undergoing chemotherapy) and statistical methods. The results were processed with SPSS v. 20.0, using the following analyzes:

- Dispersion analysis (ANOVA);
- Variation analysis - arithmetic mean \pm standard deviation (mean \pm SD);
- Correlation analysis - Pearson's ratio and Spearman's ratio
- Regression analysis - univariate linear regression
- Risk assessment analysis (OR, RR)
- Comparative analysis (evaluation of hypotheses) - χ^2 , F и t-test.
- Graphical and tabular method of displaying the obtained results

An acceptable level of significance $p < 0.05$ is assumed for all analyzes performed. The clinical trial was conducted after obtaining permission from the Commission on Ethics of Research at MU-Varna - Minutes / Decision № 63, meeting on 22.06.2017. All participants in the study have signed an informed consent

Characteristics and evaluation of the dissertation and contributions

The studies were conducted in 2018-2021. The dissertation is based mainly on clinical trials and surveys.

The research material is sufficient, and it is collected, processed and presented for protection relatively quickly, taking into account the main pathology under consideration. The studies were performed on children with malignancies selected according to certain criteria, undergoing chemotherapy and a control group of healthy children. The survey covers 60 dentists.

All materials (information about parents, informed consent, clinical maps, enrollment schemes, etc.) are precisely prepared and included in appendices.

The obtained results are presented sequentially by tasks. The evidence is included in tables, figures and appendices.

As a result, the planned recommendations have been formed, which I consider to be especially useful for dental practice; 7 conclusions are presented, which determine: the DMFT index, which correlates with the age of the children, the conducted dental treatment, the reason for visiting a dentist in children with leukemia; PLI, which correlates with the frequency of brushing teeth in children with cancer; OHI, which correlates with dental treatment in children with cancer; the significant difference in the DMFT index, PLI, OHI and caries risk between children in the clinical and control groups; mucosal lesions as the most common complication of cancer therapy and the correlation with the child's ability to swallow, difficulty eating, drinking fluids and pain; dentists as not sufficiently informed and sufficiently prepared for the treatment of children with cancer.

Dr. Gergana Trifonova identifies a total of 6 contributions, of which 2 with theoretical and 4 with practical and applied nature:

Contributions of a theoretical nature

1. For the first time in Bulgaria the dental, oral-hygienic, periodontal, gingival and mucosal status of children with malignant diseases is studied
2. An original contribution to the country is the study of mucositis as a result of chemotherapy of children with cancer

Contributions of a practical nature

1. Recommendations are made for the dental treatment of children with cancer before and after starting chemotherapy.
2. A model of preventive care for children with cancer has been created with the participation of various specialists and parents to provide effective dental prevention of caries and its complications, gingivitis, periodontitis and mucositis
3. An algorithm for dental treatment of children with cancer is proposed
4. A model for dental care of children with oncological diseases during the oncological therapy is proposed

The developed topic contains conclusions and recommendations that are applicable in dental practice. They should be promoted among students, dentists and pediatric dentists to be useful in the treatment and protection of children's dental health.

Evaluation of the publications on the dissertation and the personal contribution of the doctoral student

A list of the scientific events related to the dissertation with the participation of Dr. Gergana Trifonova is added to the dissertation. 3 real publications on the topic of the dissertation are included - two in the collection of scientific papers "Notice of the Union of Scientists" (2017)

and 1 in the international scientific journal "Journal of the Union of Scientists-Varna". Medicine and Ecology Series "(2019) - all are collective. In them Dr. Gergana Trifonova is the first author.

The personal participation of the doctoral student is underlined by the fact that she is the first author in all reported scientific events.

The presented dissertation shows that Dr. Gergana Trifonova has theoretical knowledge, has achieved professional skills in the scientific specialty "Pediatric Dentistry" and can independently conduct research.

Abstract

The abstract reflects the content of the dissertation abbreviated in a volume of 64 pages. As accepted, the literature review and bibliography are not included. Own research is presented consistently and accurately. The evidence is presented in 6 tables and 52 figures. The conclusions of the 6 tasks are clearly described, a conclusion is given. Corresponding to the main dissertation, the doctoral student's contributions are also presented. The abstract ends with a list of publications in connection with the dissertation.

Critical remarks and recommendations

The name of the pain rating scale should be noted in the material and methods. The results are presented graphically, but there is no discussion, comparison with other studies, proof / rejection of the hypothesis.

There are some stylistic and grammatical errors left.

The noted findings and considerations do not detract from the developed work, which is well planned and precisely executed.

I positively evaluate the established protocol for behavior in children with malignant diseases. I accept the algorithm as very useful and essential for dentists. The presentation of the most common complications and the approach in their therapy are a significant contribution and a missing link to improve the quality of life of these patients.

CONCLUSION

Dr. Gergana Trifonova Trifonova has conducted research and presents a dissertation with thematic relevance, sufficient evidence, scientific-theoretical, methodological and scientific-applied results that meet the requirements and criteria of Law on the Development of the Academic Staff of the Republic of Bulgaria, Regulations for the implementation of Law on the Development of the Academic Staff of the Republic of Bulgaria and the relevant Regulations of MU - Varna.

I give my positive assessment of the presented dissertation "Assessment of oral status in children with malignant diseases undergoing chemotherapy", his abstract, results and contributions, and I invite the esteemed scientific jury to award the educational and scientific degree "Doctor" to Gergana Trifonova Trifonova in a doctoral program in pediatric dentistry.

20.04.2022



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