

**To the chairman of the scientific jury, stated
by ordinance № P-109-297/12.07.2021 y.
Of the Headmaster of Medical University – Varna**

Standpoint

**By assoc. prof. Milena Todorova Georgieva – Dimitrova, PhD,
Medical University “Prof. dr. Paraskev Stoyanov” – Varna,
Faculty of dental medicine, Department of Pediatric Dentistry.**
Member of scientific jury, engaged with ordinance № P-109-297/12.07.2021 y.
Of the Headmaster of Medical University – Varna

With reference to: Dissertation work for awarding educational and scientific “doctoral degree” in the field of higher education 7. Healthcare and sport, professional range 7.2. Dental medicine, in doctoral program “Pediatric Dentistry” to the department of “Pediatric Dentistry”, FDM, MU – Varna.

Topic: Distribution of white carious lesions among patients with fixed orthodontic appliances and its correlation with the level of plaque control and gingival inflammation.

Author: Dr. Elena Todorova Dimova, assistant in Medical University “prof. dr. Paraskev Stoyanov” – Varna, Faculty of Dental Medicine, Department of “Pediatric Dentistry”.

Supervisor: Prof. dr. Radosveta Stoyanova Andreeva – Borisova, PhD, DSc.

Type of the doctoral studies: full-time education

1. Common representation of the procedure.

The presented set of materials on paper and flash-drive is in compliance with Procedure for awarding educational and scientific degree “doctor” in the field of higher education 7. Healthcare and sport, professional range 7.2. Dental medicine, in doctoral program “Pediatric Dentistry to the department of “Pediatric Dentistry”, FDM, MU – Varna.

Notes and commentary regarding the documents:

The presented dissertation work for the aim of a standpoint had been written in 166 pages, 12 of which contain 10 addendums. In the text for visualization 23 tables, 69 figures, bibliography of 305 literature sources, from which 9 were on Cyrillic and 296 on latin, had been included. The dissertation includes introduction, literature review, aim, tasks, hypothesis, material and method, results and discussion, conclusion, contributions, bibliography and addendums and fills the normatively established requirements for awarding educational and scientific degree “doctor”.

The abstract presented to me shows the structure of the dissertation and fills the requirements of the Law for the development of the academic staff of the Republic of Bulgaria.

The doctoral student had applied three official articles in correlation with the topic of the dissertation work. In all three articles dr. Dimova is main author.

Author's biographical information and career development:

Dr. Elena Todorova Dimova was born on 12.10.1992 in Dobrich. In 2011 Dr. Dimova graduates in Humanitarian High School "St. Kiril and Metodiy" in Dobrich in the field of foreign languages. In 2017 graduates with Master's degree in Dentistry in Medical University "prof. dr. Paraskev Stoyanov" – Varna. She teaches bulgarian and foreign students from 3, 4 and 5th grade. Member of Bulgarian Dental Union and the National Association of the Pediatric dentists.

2. Assessment of doctoral student's personal participation in the dissertation.

The dissertation work discusses a current problem in the contemporary dental medicine related with the appearance of white carious lesions in particular and their further developmental problems in patients with fixed orthodontic appliances.

Dr. Dimova had made a critical analysis of the literature on the current topic, which motivated her to bind-up the aim of her scientific study: "To research the distribution and severity of the white carious lesions in relation with the level of plaque control and the gingival inflammation in patients with fixed orthodontic appliances".

To achieve the results of the aim she sets the following tasks:

- 1) To examine the distribution of the white carious lesions in patients with fixed orthodontic appliances.
- 2) To investigate the accumulation of the plaque in children with fixed orthodontic appliances and to compare it with the control group.
- 3) To investigate the level of the gingival inflammation in children with fixed appliances and to compare it with the control group.
- 4) To assess the severity of the white carious lesions in patients who are experiencing treatment with fixed appliances.
- 5) To make an assessment of the specific carious risk profile of patients with fixed orthodontic appliances.
- 6) To create an algorithm for prevention of the carious white lesions in patients with fixed orthodontic appliances in correlation with the level of the oral hygiene.

For the execution and assessment of the set tasks different methods of examination had been used: EDI - Banks and Richmond index; Orthodontic Plaque Index (OPI); Oral Hygiene Index-S (Simplified) - Greene and Vermillion, 1964; GI - Löe and Silness; Gorelick index; risk of development of white carious lesions by Heymann and Grauer; DMFT index; and relevant analysis: dispersion analysis (ANOVA); variational analysis – arithmetic mean \pm standard deviation (mean \pm SD); correlation analysis – coefficient of Pearson and coefficient of Spearman; regression analysis – single-optional linear regression; analysis of the risk assessment - Odds Ratio (OR); comparative analysis (hypothesis assessment) – χ^2 , F and t-test. The received outcomes are correctly interpreted and presented with figures and graphics on the personal researches in correlation with the set materials and methods. The discussion on every task had been made and based on the personal researches.

The conclusions correspond with the received outcomes.

The self-assessment and the contributions of the dissertation work include 3 original type contributions, 4 practically type contribution, 3 affirmative contributions:

Original type contributions are:

1. The dissertations shows for the first time in Bulgaria a current data about the oral health of children experiencing orthodontic treatment with fixed appliances.
2. For the first time a detail analysis had been made regarding the distribution and severity of the white carious lesions with specially chosen indexes in patients with fixed orthodontic appliances.
3. For the first time in the risk profile in patients experiencing fixed orthodontic treatment had been examined behavior factors concerning their nutritional habits and the oral hygiene.

Practical type contributions are:

1. It was developed risk profile about the white carious lesions of patients experiencing fixed orthodontic treatment.
2. It was developed and suggested algorithm for the prevention and following-up patients experiencing orthodontic treatment with fixed appliances.
3. It was developed and suggested protocols for prevention of the white carious lesions in children with low risk, in children with high risk and/or low cooperation and in the initial development of the white carious lesions.
4. It was developed informative motivational materials for children experiencing fixed orthodontic treatment as well as their parents regarding nutritional habits and effective oral hygiene.

Affirmative type contributions are:

1. Correlation between fixed orthodontic treatment and high caries activity had been proven, the gingival inflammation and the accumulation of dental plaque.
2. It was confirmed that the longevity of the orthodontic treatment, the metal braces and gender (male) of the patients have negative effect on the oral health.
3. It was confirmed the high cooperation of the patients lead to significantly better results in the common treatment, maintaining a good oral hygiene and absence of gingival inflammation.

In conclusion: The dissertation work of dr. Elena Dimova: “Distribution of white carious lesions among patients with fixed orthodontic appliances and its correlation with the level of plaque control and gingival inflammation” **has its own contribution to the science and responds to all requirements** according to the Law of development of the academic staff in Republic of Bulgaria, the regulations for its applying and the rules of the Medical University – Varna. Due to these reasons I suggest **dr. Elena Dimova to be awarded with scientific and educational degree “doctor”** in the field of higher education 7. Healthcare and sport, professional range 7.2. Dental Medicine.

Varna

Standpoint preparation:

08.09.2021 г.

.....
(assoc. prof. Milena Georgieva-Dimitrova, PhD)