

## REVIEW

By

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**of PhD Thesis**

### **ALTERNATIVE TOOTH PREPARATION METHODS FOR FULL COVERAGE CROWNS**

regarding acquisition of the educational and scientific degree “doctor” in the field of Higher education 7. Health care and sport. Professional domain: 7.2. Dental medicine. PhD-Program: “Orthopedic Dentistry”

**Author:** Dr. Magdalena Norman Gugleva, full time PhD student, Department of Dental material science and Prosthetic dental medicine, Faculty of Dental medicine, MU-Varna

**Scientific advisor:** Assoc. Prof. Dr. Iveta Plamenova Katreva, DMD, PhD

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#### **1. General presentation of the procedure and of PhD student**

The submitted dissertation work (paper based and electronic) is in a form and volume that meet the requirements of the Law on the Development of the Academic Staff of the Republic of Bulgaria (LAD), the Regulations for the Implementation of the Law on the Development of the Academic Staff in Bulgaria (RILAD) and the Regulations for a development of the academic staff of MU-Varna.

The PhD student dr Magdalena Norman Gugleva has presented 3 full text scientific papers related to the PhD thesis. In one article she was single author, in the next 2 she had co-author and in one of them she was first author. These papers were published in the time between 2021-2023 year in International Journal of Science and Research which has an impact factor.

#### **Notes and comments on the presented documents:**

The presented documents are properly prepared and submitted and meet all the requirements.

## **2. Biographical date of the PhD student dr. Magdalena Norman Gugleva:**

Dr. Magdalena Norman Gugleva was born on 26. 06. 1992 in Varna. In 2011 she finished secondary education in First language school – Varna. In 2017 she graduated Dental medicine in FDM - Sofia. Since 2018 she has been an assistant at the Department of Prosthetic Dental medicine, FDM-Varna, MU-Varna. In 2022 she acquired a specialty “Prosthetic dental medicine”. She is a member of BDU.

## **3. Evaluation of the actuality of the topic and expediency of the purpose and tasks**

Preparation of hard dental tissues and taking of precise and detailed impressions are the most important manipulations in fixed prosthodontics.

To decide these problems it was created great number of materials and methods, which should be known to resolve different clinical cases in everyday practice. Preparation of hard dental tissues is one of the oldest and debatable question in Bulgarian and world literature. This give reason to define the subject of the thesis like topical as biologically oriented preparation technique was published in literature in 2008 and chosen purpose and tasks suitable for its evaluation.

Alternatives and for regret traditional preparation techniques of hard dental tissues are not well known of practising dentists.

The purpose of the dissertation is to prove advantage of the biologically oriented preparation technique in prosthetic treatment with full coverage crowns in the aesthetic area and to evaluate the clinical results of its application.

## **4. Knowledge of the problem**

The literature review engages 50 pages and it is well organized. It was discussed in detail the anatomy of gingiva and terms related with it, which make easy look at different preparation and impression techniques.

The bibliography is written on 24 pages and it consists of 352 references, 32 of them are in Cyrillic and 320 are in Latin. The literature review shows that PhD student Dr. Magdalena Norman Gugleva knows the state of the problem in detail. The doctoral student has created diverse knowledge in the researched area, which allows her to formulate the purpose and tasks of the dissertation work.

## **5. Methods of the tasks**

The developed research methodology allows achieving the purpose and obtaining a logical answer to the tasks of the dissertation work.

## **6. Characteristics and evaluation of the PhD thesis**

The dissertation contains 192 pages and is illustrated with 12 tables, 161 figures and 4 applications. The PhD thesis of Dr Gugleva is directed to an old and at the same time actual problem of contemporary Prosthetic Dentistry that is how is the best to prepare teeth for complete crowns.

The literature review is comprehensive and well organized.

The purpose and the tasks correspond to the chosen topic. In order to solve this problem 4 tasks (1 of them contain 2 subtasks) are formulated.

The developed materials and methods allow solving the problem which includes the purpose and the specific tasks. They are described in detail and well-illustrated with a sufficient number of figures.

The results of the implementation of the specific tasks are well illustrated with photographic material, tables, schemes and diagrams. Dr Gugleva provides a detailed statistical analysis of the obtained results. The discussion meets modern requirements.

The deduction and conclusions are directly related to the obtained results and are supported by statistically processed tables and diagrams. Contributions reveal the practical orientation of scientific work.

## **7. Contributions and significance of the PhD thesis for science and practice**

The contributions of the dissertation work of Dr. Magdalena Norman Gugleva are defined as:

### **1. Scientific and applied contributions**

#### **1. Original contributions:**

- For the first time in Bulgaria, the periodontal response of soft tissues after prosthetic treatment with fixed prosthetic restorations on teeth prepared using a biologically oriented preparation technique has been investigated and clinically evaluated;
- For the first time in Bulgaria, the periodontal response after applying two different methods for fabrication temporary restorations has been compared;
- For the first time in Bulgaria, an alternative to vertical preparation margins technique has been

presented.

1. 2. Confirming contributions:

- It has been confirmed that the application of a biologically oriented preparation technique results in a biotolerant behavior of the teeth-surrounding soft tissues towards fixed prosthetic restorations;
- It has been confirmed that after preparation using the biologically oriented preparation technique around the crown margins of fixed prosthetic restorations, there is reduced plaque retention;
- It has been confirmed that the application of a biologically oriented preparation technique results in reduced bleeding on probing around the permanent fixed prosthetic restorations;
- It has been confirmed that the biologically oriented preparation technique leads to an increase the thickness of the free gingival margin.

2. **Applicable contributions:**

- An algorithm is developed for fabrication of temporary constructions by direct-indirect method with the "egg-shell" technique using biologically oriented preparation technique.

**7. Publications related to the topic of the dissertation:**

The publications related to dr. Gugleva's dissertation are 3 in total. In one she is single author and in two she has co-author and in one of them she is the first author. This give the reason that she can work independently and at team work. These full text publications are on the topic of the dissertation and they meet the requirements of NACID (National Center for Information and Documentation) for acquiring the educational and scientific degree "Doctor". All articles were published in International Journal of Science and Research.

**8. Personal involvement of the doctoral student**

The personal participation of the PhD student Dr. Magdalena Norman Gugleva together with her scientific advisor Assoc. Prof. Dr. Iveta Plamenova Katreva, DMD, PhD in the conducted dissertation thesis is indisputable and the formulated contributions and obtained results are their personal contribution.

**9. Abstract of the PhD thesis**

Dr. Gugleva's abstract was made according to the relevant rules and requirements, and

reflects the main results obtained in the dissertation work.

#### **10. Critical reviews and recommendations**

I have no critical reviews on the presented dissertation work.

#### **11. Personal impressions**

Dr. Magdalena Norman Gugleva was a student in FDM – Sofia and is assistant in FDM-Varna. My personal impressions are based on her dissertation and they give me the reason to evaluate her as good scientific worker and teacher.

#### **12. Recommendations for future application of the dissertation contributions and results**

The scientific field, in which Dr. Gugleva works, presents problems for solving with extreme importance for fixed prosthodontics. The biologically oriented preparation technique is quite new and this technique needs from more works and more clinical evaluations of its results. Every publication about the biologically oriented preparation technique is of interest to dental practitioners and to international referred journals incl. those with an impact factor.

#### **CONCLUSION**

The PhD thesis contains scientific, scientific-applied and applied results which are original contributions in science and meet all the requirements of the Law on the Development of the Academic Staff of the Republic of Bulgaria (LAD), the Regulations for the Implementation of the Law on the Development of the Academic Staff in Bulgaria (RILAD) and the Regulations for a development of the academic staff of MU-Varna. The submitted materials and dissertation results correspond to the specific requirements of MU-Varna.

The dissertation shows that the doctoral student Dr. Magdalena Norman Gugleva possesses in-depth theoretical knowledge and professional skills in the scientific specialty "Prosthetic Dentistry". The doctoral student shows qualities and skills for independent and team conducting of scientific research.

Taking into consideration all the criteria for awarding the educational and scientific degree "doctor" written in LAD, RILAD and the Regulations for Development of the Academic Staff of the MU-Varna, I will **vote positively** to the PhD thesis "Alternative tooth preparation methods for full coverage crowns" and I will **vote positively** for awarding dr. Magdalena Norman Gugleva the educational and scientific degree "doctor" in the field of Higher education and PhD-program 03.03.03. "Orthopedic Dentistry".

Sofia  
14. 11. 2023

Sincerely:  
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