

STATEMENT

by

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**Member of the Scientific jury by order № P-109-247 / 09/06/2021 of the Rector
of MU – Varna**

**On dissertation for awarding the educational and scientific degree “Doctor of
Philosophy”**

**Topic: Comparison of treatment methods for chronic periapical
inflammatory diseases**

Sphere of higher education: 7. Health and sports

Professional field: 7.2. Dental Medicine

Scientific specialty: Therapeutic Dentistry

Author: Denitsa Georgieva Zaneva-Hristova

Form of doctorate programme: regular

Department: Conservative Dentistry and Oral Pathology, FDM, MU – Varna

Scientific supervisor: Assoc. Prof. Tsvetelina Borisova-Papancheva, DMD, PhD

GENEGAL PRESENTATION OF THE PROCEDURE AND THE PHD STUDENT

The presented set of documents and materials on electronic media is prepared correctly in compliance with the requirements of the LDASRB, the Regulations for its implementation, and the Regulations for the development of the academic staff at MU – Varna, and includes:

1. Enrollment order № P-109-446 / 16/07/2018;
2. European form of CV signed by the author;
3. Copy of the diploma of completed Master's degree;
4. Doctoral minimum exam reports (in the specialty and English);
5. Protocol from the Department's Council №81 / 19/05/2021 with positive decision on the readiness for defense;
6. Deduction order № P-109-247 / 09/06/2021 for the right to defense;
7. List of publications in connection to the dissertation, signed by the author; copies of the same publications;
8. Declarations;
9. Dissertation;
10. Abstract.

Biographical data of the PhD student

Dr. Denitsa Georgieva Zaneva-Hristova was born on 8th May 1991 in Varna. She graduated from high school in 2010 (High School of Mathematics "Dr Petar Beron" – Varna), and in 2016, she obtained a Master's degree in Dentistry at Medical University of Varna (diploma №003846). Since October 1, 2016 Dr. Zaneva-Hristova has been working as an assistant professor in the Department of Conservative Dentistry and Oral Pathology at the Faculty of Dental Medicine, MU – Varna, taking part in the educational course – preclinical and clinical practical classes, both in Bulgarian and English.

CHARACTERISTICS AND EVALUATION OF THE DISSERTATION

Analysis of the structure of the dissertation

The dissertation of Dr. Zaneva-Hristova is structured according to the requirements of the Regulations for the development of the academic staff at MU – Varna. It consists of 185 standard pages and it is illustrated with 46 tables, 96 figures and 5 applications. The bibliography contains 199 literary sources, 6 of which in Cyrillic and 193 in Latin; 119 of them are published in the last 10 years.

Relevance of the topic

The endodontic treatment of periapical inflammatory diseases is still a challenge. It requires a good knowledge of the anatomy of the root canal system, the various therapeutic methods and materials used, as well as aseptic work and adequate three-dimensional canal sealing and filling. Problems can arise in each of these aspects, as the main ones originate from the choice of the treatment method (single-visit or multiple-visit one), the ability to ensure permanent reduction of the bacterial count in the infected root canals and to cope with the postoperative hypersensitivity.

Therefore dissertation like this one, presenting and comparing the advantages and disadvantages of the various therapeutic methods and contemporary materials used in them, is relevant, and the conclusions in it can be useful for the dental community in Bulgaria.

Literature review

The introduction is short and tight and directs us to the problem. **The literature review** presents the available up-to-date information on the selected topic (60% of the literary sources are published in the last 10 years), as the emphasis is on the treatment of chronic periodontitis by a single-visit and multiple-visit method, the drugs used, and a comparison of the two approaches. It is supplemented with a description of the bacterial culture study as diagnostic tool and method for evaluation of the effectiveness of the medications used in the treatment. Special attention is paid to postoperative pain and control of the healing process. The analysis of the review points to the unresolved issues regarding the choice of treatment method and materials.

Aim and tasks

The aim of the dissertation is to compare the methods of treatment of chronic periodontitis and to study the effectiveness of different materials used for this treatment. To achieve the aim, 5 tasks have been set, and they are completely sufficient.

Materials and methods

Dr. Zaneva conducts her own research on 2 target groups – dentists and patients with chronic apical periodontitis. 80 dentists fill out a questionnaire, the questions of which concern the choice of treatment method and medication, the isolation of the operative field, the irrigation protocol, the technique and materials for filling of root

canals, the duration of follow-up of the treated teeth. The patients included in the study are 71, divided into 4 age groups. The survey, conducted among them, focuses on pain symptoms in 5 different intervals after endodontic treatment, and the clinical study consists of carrying out and monitoring the results of endodontic treatment of teeth with chronic apical periodontitis by single-visit (31 patients) or multiple-visit method (40 patients) using various medication as root canal dressings.

For the implementation of the tasks a variety of equipment is used – X-ray equipment (Planmeca ProMax 2D S3, Planmeca ProMax 3D Max, Planmeca ProX), special devices (NSK IpexII apex locator, Ultra X ultrasonic activator, Soft-Core Heater), software (PS CS5 EXTENDED).

The results are processed using a specialized package IBM SPSS Statistics 20 and are presented in graphical and tabular form.

I think that the material on the tasks is sufficient and the methods are carefully selected.

Results and discussion

Dr. Zaneva finds in the **first task** that dentists who apply multiple-visit method for the treatment of asymptomatic apical periodontitis prevail (83.75%), and the most commonly used intracanal medical dressing is based on calcium hydroxide. Most dentists apply an adequate irrigation protocol and monitor the treatment outcome until the second year. A fact that can compromise treatment is the poor isolation – few colleagues use a rubber dam.

The survey among patients shows that great part of them experience pain after endodontic treatment, and it is rather late complication. The pain is more common when multiple-visit method is applied. These data are consistent with information from similar studies.

The results of the **second task** show that in the single-visit treatment method the pain is not a frequent complication – it is registered mainly in men and disappears within 48 hours after the root canal filling. The most commonly identified microorganism is *Enterococcus faecalis*, and proper treatment of the endodontic space eliminates it in 97% of cases. The follow-up shows 95% success rate of treatment.

In the **third task** is established that the multiple-visit treatment method with administration of calcium hydroxide as root canal dressing is followed by postoperative hypersensitivity in majority of patients – shares of men and women are almost equal, but

pain persists more commonly in men. The identified bacteria are fully eliminated and the radiographic follow-up shows a significant reduction of periapical lesions. These data are comparable to the results of similar studies.

The results of the **fourth task** show that in the multiple-visit treatment method without administration of intracanal dressing, postoperative hypersensitivity is rarely observed and there is no reinfection of root canals. The disadvantage is the unsatisfactory reduction of periapical changes.

In the **fifth task** Dr. Zaneva finds that the irrigation protocol enriched with chlorhexidine in the multiple-visit treatment method leads to a satisfactory healing process in the periapical area and lack of postoperative hypersensitivity.

Conclusions

The 12 conclusions are a logical consequence of the obtained results. They are presented with scientific accuracy.

Contributions

Dr. Zaneva divides the contributions of her research into two groups – contributions with confirmatory and original character. I believe that this formulation can be accepted.

Assessment of the publications

The results of the study are promoted through 2 congress participations and 3 publications. Dr. Zaneva is the first author of all publications, and a single author of two of them. This proves that the research is a personal work.

Abstract

The abstract of 68 pages is presented in the appropriate volume required by the rules set out in the Regulations for the development of the academic staff at MU – Varna. It is properly structured, well illustrated and corresponds to the individual sections of the dissertation.

Critical remarks

In general, Dr. Zaneva complied with the remarks and suggestions made by the members of the Department during the preliminary presentation of the research. There are several things I don't like – the personal style of the doctoral student in presenting the

information is not visible in the literature review; the conclusions are not concisely presented, but rather descriptively; no model for describing the sources in the bibliography was followed.

CONCLUSION

Dr. Denitsa Georgieva Zaneva-Hristova, doctoral student and an assistant professor in the Department of Conservative Dentistry and Oral Pathology at the Faculty of Dental Medicine – Varna has submitted for statement a completed dissertation, with significant results for the dental practice.

The dissertation meets the qualitative and quantitative criteria for acquiring the educational and scientific degree "Doctor of Philosophy", set out in the Law for development of the academic staff in the Republic of Bulgaria, the Regulations for its implementation, and the Regulations for the development of the academic staff at MU – Varna.

This gives me grounds for **positive assessment and I propose to the esteemed Scientific Jury to award the educational and scientific degree “Doctor of Philosophy”** to Dr. Denitsa Georgieva Zaneva-Hristova.



Varna

17/08/2021

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(Assoc. Prof. Miglena Balcheva-Eneva, DMD, PHD)