

## Opinion

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### ABOUT

the dissertation of Dr. Denitsa Georgieva Zaneva-Hristova-assistant at the Department of Conservative Dentistry and Oral Pathology of FDM-Varna on the topic "Comparison of treatment methods for chronic periapical inflammatory diseases", presented for obtaining the educational and scientific degree "Doctor" with supervisor Assoc. Prof. Dr. Tsvetelina Borisova-Papancheva, MD, in accordance with Rector's order R 109-247 as of 09.06.2021.

#### Biographical data

Dr. Denitsa Zaneva-Hristova was born in 1991 in the city of Varna. In 2016 she graduated from the Faculty of Dental Medicine, Medical University of Varna. For a year, starting 2016, she was a part-time, and since 2017 she has been a full-time assistant professor at the Department of Conservative Dentistry and Oral Pathology at the Medical University, Varna. Since 2018 she has been a doctoral student in an independent form of study at the same department.

#### Relevance of the problem

Most endodontic problems are associated with microbial invasion, and its removal or reduction is considered one of the most important steps in root canal therapy. The likelihood of visits for treatment of infected root canals is a frequently discussed topic in endodontics. Endodontic treatment through multiple visits is a traditionally accepted method. However, an alternative protocol involving one visit has been proposed. The fact is that there are different options is proof of unresolved issues in this area.

#### Structure of the dissertation.

The dissertation contains 185 standard pages, 46 tables and 96 figures. The bibliography consists of 199 sources, 6 of which in Cyrillic and 193 in Latin. It ends with five appendixes. Structurally it fully complies with the generally accepted norms.

The introduction directs us to the idea. The literature review reflects the current knowledge regarding treatment of periodontitis by a one-stage and a multi-stage method, describes the drugs and materials used, and provides comparison of the two aforementioned methods. Data on the importance of CBCT for diagnosis are presented. The presented review showcases numerous unresolved problems, which reveals the need for a mandatory study of the drugs used, their quality, possible postoperative pain and

the healing process. The objective of the research is provided in details – a comparison of the methods of treatment of periodontitis, comparison and study of the effectiveness of different materials used for treatment. The 5 tasks logically follow from the background idea and allow the implementation of the study.

Materials and methods include questionnaires, internal radiography, orthopantomography, CBCT, and laboratory methods for confirmation of pathogenic microorganisms from root canals.

The results of Dr. Zaneva's research establish that most dentists rely on the generally accepted protocol for treating teeth with chronic periapical inflammatory diseases involving a multi-stage method. Most of the respondents reported the application of modern techniques for irrigation and obturation of root canals, but often Dr. Zaneva found the neglect of adequate isolation. The results obtained from a survey of people treated either via a single-stage method or a multi-stage one demonstrate the higher incidence of pain in male patients at each stage of treatment. The author finds out that patients aged 36-60 years often report painful symptoms, which may be associated with changes in humoral and cell-mediated immunity. A large number of respondents reported persistent symptoms after multistage treatment.

After processing the results, Dr. Zaneva concludes that there is no justifiable reason to give preference to either of the two techniques for treating teeth with chronic periapical inflammatory diseases. The researcher observed a statistically significant difference between the results before and after treatment based on periapical lesion modified with PAI in teeth treated by a single-stage method. The study proves that adequate isolation of the operative field, proper mechanical and chemical treatment, including only EDTA, 5.25% sodium hypochlorite and saline, can be provided to control infection and reduce microorganisms (*Ent.faecalis*, *C.albicans*, *E.coli*, *Pseudomonas aeruginosa*) in the root canal system. One-stage treatment of teeth with a chronic asymptomatic apical period is a good alternative to multi-stage treatment by using drugs such as calcium hydroxide and chlorhexidine. The application of a one-step method will reduce treatment time, visits and patient discomfort from repetitive dental procedures, as well as the risk of reinfection in the presence of microleakage of temporary filling between visits.

From the results of the third task, it is clear that the multi-stage treatment of chronic periapical inflammatory diseases does not give satisfactory results in terms of postoperative sensitivity.

The fourth task shows that the multi-stage treatment of periapical inflammatory diseases by this method gives satisfactory results in terms of postoperative sensitivity, but establishes an unsatisfactory reduction of periapical change.

The results of the last task show that the multi-stage treatment has a success rate of 100% in terms of postoperative sensitivity. In the long run, the treatment of teeth with chronic periapical inflammatory diseases by a multi-stage method using chlorhexidine as an



intra canal drug leads to the desired and expected results. Studies have shown better healing processes in teeth treated with a one-step method, although no statistically significant difference has been found.

Six conclusions from the clinical trial and from the questionnaire studies have been formulated. Two contributions with an original character and 3 with a confirmatory one are described.

#### Publishing activity

Dr. Zaneva is the sole author of two publications and the first author together with her supervisor in a third article related to the dissertation. This shows her leading role in the research and the working out of the article. The research has been presented at two scientific congresses in recent years.

#### Summary

The summary corresponds to the content of the dissertation and is in accordance with the accepted requirements. In 68 pages the goal, tasks, material and methods and the results obtained are cogently presented. The conclusions, contributions, publications and participation in scientific events of Dr. Zaneva are also included.

#### Conclusion

The dissertation is designed according to the generally accepted requirements, has scientific and applied value and its structure fully complies with the accepted norms. All this gives me reason to strongly recommend the members of the scientific jury to grant Dr. Dencia Zaneva the educational and scientific degree "Doctor".

28.07.2021

Prof. Dr. Vladimir Panov

