

## **REVIEW**

**By**

**Prof. dr. Hristo Kalchev Kissov, PhD, DDM**

**Sofia, 22 “Layosh Koshut” Str., office №5, CDM “Esthetic Implantology” OOD**

**of PhD Thesis**

### **PROSTHETIC TREATMENT OF PATIENTS WITH A STRONG NAUSEA AND VOMITING REFLEX**

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. Tsvetelina Nikolova Kanlieva, full time PhD student, Department of Dental material science and Prosthetic dental medicine, Faculty of Dental medicine, MU-Varna

**Scientific advisor:** Prof. Dr. Metodi Zahariev Abadzhiev, DSc, PhD, DMD

The review was prepared pursuant to order № P-109-394/08. 09. 2023 of the Rector of MU-Varna and Protocol № 1/20.09.2023 of the Scientific Jury.

#### **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 Tsvetelina Kanlieva has presented 3 full text scientific papers related to the PhD thesis and she is the first author. One of the papers is published in Journal of IMAB 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 data of the PhD student dr. Tsvetelina Nikolova Kanlieva:**

Dr. Tsvetelina Nikolova Kanlieva is born on 04.08.1988 in Velingrad. In 2007 she graduated high school – “St. St. Kiril and Metodii”. In 2013 she graduated Dental medicine in FDM of MU-Plovdiv. 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**

The patients with strong nausea and vomiting reflex were, are and will be an unpleasant challenge for all dentists. Severe gag reflex makes difficult clinical procedures such as taking an impression in fixed prosthodontics and cementation of the permanent restorations. The treatment of completely edentulous patients with strong nausea and vomiting reflex is even more difficult. Taking an impression is a real challenge for both the dentist and the patient. Even though it is rare but some of these patients refuse to use perfectly fabricated dentures.

This group of patients is usually not a student contingent, and perhaps this explains why the problem is not the subject of studies and publications. Each dentist meets in one’s dental practice patients with a strong nausea reflex and they make one’s work extremely difficult and stressful. The purpose of this PhD thesis is to study the reflex of nausea and vomiting in at-risk patients and to create algorithms for working with them in various prosthetic manipulations.

## **3. Knowledge of the problem**

The literature review is developed in 42 pages and it shows well the diverse sides of the problem of the gag reflex. Regardless of the antiquity of the problem under consideration, the fact is that there is no clear and precise dental clinical protocol in such cases.

The bibliography is written on 7 pages and it consists of 175 references, 45 of them are in Cyrillic and 130 are in Latin. The literature review shows that PhD student Dr. Tsvetelina Nikolova Kanlieva 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.

## **4. Methods of the tasks**

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

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

The PhD thesis contains 162 standard pages. It is illustrated with 21 tables, 95 figures and 6 applications.

Dr. Kanlieva's dissertation is aimed at an old and at the same time current problem of modern prosthetic dentistry- how to overcome the problems related to the prosthetic treatment of patients with a strong nausea and vomiting reflex.

The literature review is comprehensive and well organized.

The purpose and the tasks correspond to the chosen topic.

The aim is to study the reflex of nausea and vomiting in at-risk patients and to create algorithms for working with them in various prosthetic manipulations.

In order to solve this problem 4 tasks (3 of them contain 2 subtasks each) 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. The dissertation provides a detailed statistical analysis of the obtained results. The discussion meets modern requirements.

The conclusion 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.

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

The contributions of the dissertation work of Dr. Tsvetelina Nikolova Kanlieva are defined as:

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

#### **1.1. Of an original character**

- For the first time in Bulgaria, the sensitivity of the lining of the oropharynx was studied by plastic fibers with approximately logarithmic scale of actual strength and linear scale of perceived intensity.
- For the first time, homeopathic was used to influence the vomitus reflex.
- It has been found that the nausea reflex after taking homeopathic remedies is reduced in 44.30% of patients. Tactile flair is preserved.

- It was found that sensory and reflex response after administration of a local anesthetic was decreased in 48.76% of the patients studied.

### 1.2. Confirmatory in nature

- It has been confirmed that in the prosthetic treatment of patients with the pharyngeal reflex, the most difficult to manage is the impression procedure.
- The most reflexogenic zones of the oropharyngeal complex were confirmed, with 100% of the subjects having gag reflex in the area between the hard and soft palates, 91.74% the posterior third of the tongue and 52.89% - the lateral edges of the tongue.
- It has been confirmed that the size of the receptor field is relevant for the occurrence of a nausea reflex.
- It has been confirmed that after delivering a new removable prosthesis, patients with enhanced palatal reflex continue to be intolerant due to contact of the denture base with receptor fields.
- Lidocaine has been confirmed to reduce the nausea reflex, but is only applicable by the dentists in clinical settings.

### 2. Applied Contributions

- An algorithm has been created for the management of patients with an increased gag reflex and the use of homeopathic medicines, which can be applied during the clinical stages and during the adaptation period by the patient himself.

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

The publications related to dr. Kanlieva's dissertation are 3 in total. She is the first author in all of them which shows that she is good at team work. They are full text publications 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". One of the papers is published in Journal of IMAB (impact factor).

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

The personal participation of the PhD student Dr. Tsvetelina Kanlieva together with her scientific advisor Prof. Dr. Metodi Zahariev Abadzhiev, DSc, PhD, DMD 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. Kanlieva'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. Kanlieva was my student at FDM - Plovdiv.

The dissertation presents her as a good assistant who is committed to solving a problem that students provoke and that they have to overcome.

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

The scientific field, in which Dr. Kanlieva works, presents problems for solving with extreme importance for fixed prosthetics because ensuring a dry operative field is of primary importance in such cases.

Any progress in controlling the gag reflex is of interest to dental practitioners and to international refereed 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 to the specific requirements of MU-Varna.

The dissertation shows that the doctoral student Dr. Tsvetelina Nikolova Kanlieva 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 “Prosthetic Treatment Of Patients With A Strong Nausea And Vomiting Reflex” and I will **vote positively** for awarding dr. Tsevtelina Nikolova Kanlieva the educational and scientific degree “doctor” in the field of Higher education and PhD-program 03.03.03. “Orthopedic Dentistry”.

Sofia

28. 10. 2023

Sincerely:

Prof. dr. Hristo Kalchev Kissov, PhD, DDM