

## REPORT

from

**Associate Professor Asya Zaharieva Krasteva-Panova, Ph.D.,**

associate professor at the Department of "Image and Oral Diagnostics",

Faculty of Dental Medicine, MU-Sofia

About:

**acquisition of a scientific and educational degree "Doctor"** in the field of:

Higher education: 7. Health and sports.

Professional direction: 7.2. Dentistry.

Doctoral program: " Therapeutic Dentistry "

On dissertation labor on subject :

**" Studying the results of the application of  
autogenous, platelet-rich plasma at  
regenerative therapy of vertical bone defects "**

**Author** : Dr. Tsvetalina Ivanova Gerova-Vatsova

Doctoral student , regular form on education by procedure for acquisition on educational and scientific degree "Doctor" in the Department of Periodontology and Dental Implantology , Faculty of Dental Medicine at Medical University "Prof. Dr. Paraskev Stoyanov" - Varna .

**Scientific Supervisor** : Prof. Stefan Vasilev Peev, Ph.D.

### **1. Overall presentation**

The opinion has been prepared after an order No. R - 109-393 / 07.09.2023 by the Rector of MU – Varna.

The presented set of materials on paper and electronic carrier is in accordance with Art . 44 (3) of the Regulations for development on the academic composition in MU – Varna .

The dissertation contains 230 pages. It is illustrated with 93 tables, 86 figures , 3 equations and contains 26 appendices . The bibliography includes 396 literary sources, of which 6 are in Cyrillic and 390 are in Latin. It is structured correctly. Its contents include: introduction, literature review, aim and objectives, material and methods, results and discussion, conclusions, contributions, bibliography and appendices.

Attached are 5 publications related to the topic on the dissertation work. Dr. Tsvetalina Gerova-Vatsova is the first author in four publications .

## **2. Short biographical data**

Dr. Tsvetalina Ivanova Gerova-Vatsova was born in 1992. in Novi Pazar.

In 2011 Dr. Gerova-Vatsova graduated from the "Nancho Popovich" Science and Mathematics High School Shumen.

In 2017 she graduated from Medical University "Prof. Dr. Paraskev Stoyanov", city of Varna, as a master's degree, doctor of dental medicine.

Since 2017 she is an assistant at the Department of Periodontology and Dental Implantology.

From 2019 she is enrolled as a full-time doctoral student in the "Therapeutic Dentistry" doctoral program.

In 2023 she acquired the specialty "Periodontology and diseases of the oral mucosa".

From 2023 she holds the position of "Administrative Assistant" at the Department of Periodontology and Dental Implantology.

She speaks English.

She is a member of BZS.

## **3. Relevance of the topic**

Periodontal diseases represent a significant social problem. More frequent oral problems follow carious lesions. The goal of periodontal therapy consists in the elimination of the main etiological factor - the periodontopathogenic microorganisms and regeneration of the destructured periodontal tissues.

Various techniques are used to address these challenges, such as guided tissue regeneration with the application of barrier membranes, bone-restorative materials, enamel matrix derivatives, autogenous platelet-rich plasma (PRP).

At present, insufficient evidence is available to indicate the most appropriate material for use in regenerative therapy of vertical bone defects. There are many controversies arising from the advantages and disadvantages of different biomaterials. On the other hand, autogenous platelet-rich plasma has been the subject of research many times, but always in combination with a bone-restorative material. The choice of topic is relevant, since in our country there is a lack of data on the application of autogenous platelet-rich plasma in regenerative therapy of vertical bone defects, both alone and in combination with only a barrier membrane.

## **4. Knowledge on the problem**

The doctoral student examines the literature data characterizing periodontitis and vertical bone defects, the various types of regenerative therapy and describes in detail the types of barrier membranes and bone-restorative materials.

In separate subsections, she presents comprehensive information on autogenous platelet-rich plasma and enamel matrix derivatives. She also looks analytically at the application of CBCT in periodontology.

## **5. Structuring the dissertation work**

The analysis of the data in the literature review reflects the doctoral student's excellent awareness of the problem, which is the basis for correctly formulating the unsolved problems and correctly defining the purpose and tasks of the dissertation work. The aim, objectives and research methods, results and summary of the results follow.

## **6. Research methodology. Purpose, tasks, material and methods**

The aim of the dissertation work is formulated in accordance with the lack of data in the Bulgarian literature regarding the effectiveness of the application of autogenous, platelet-rich plasma in the regenerative therapy of vertical bone defects.

The three tasks formed logically follow the idea, allowing the research to be carried out.

The materials and methods are correctly selected and adapted to the purpose and tasks of the dissertation work.

The statistical methods used are excellently selected and allow a correct analysis of the obtained data and their presentation.

## **7. Results and discussion**

The results and discussion are presented correctly and in detail and again reflect a thorough knowledge of the problem by the PhD student.

The results of the dissertation mainly demonstrate the remarkable potential of autogenous platelet-rich plasma (PRP) as a material for periodontal regenerative therapy. Statistical processing of the study data demonstrated similar results among all four groups of patients, proving that autogenous platelet-rich plasma (PRP) is a material possessing qualities that can displace previously proven biomaterials used as "gold standard" in periodontal regenerative therapy.

One of the important conclusions of the dissertation in view of the obtained results are:

- **confirmation of the synergistic potential of the barrier membrane and the qualities of the autogenous, platelet-rich plasma ;**
- **confirmation of the proven biologically active properties of the enamel matrix derivatives ;**
- **autogenous platelet-rich plasma and enamel matrix derivatives are materials that demonstrate equally good results as guided tissue regeneration ;**
- **the recommended therapeutic methods are regenerative therapy using PRP or regenerative therapy using EMD before NTP in vertical bone defects.**

## **8. Conclusions and contributions**

11 conclusions were formulated, reflecting the results of the set tasks of the dissertation, of which conclusions 8, 9, 10 and 11 are particularly important for practice, stating that



- In all studied patients from the four groups, a statistically significant reduction of the distance from the CEJ to the base of the bone defect was found (CBCT indicator "A").
- In all studied patients from the four groups, a statistically significant reduction of the distance from the CEJ to the highest bone point of the bone defect (CBCT indicator "B") was found.
- In all studied patients from the four groups regarding the width of the bone defect (CBCT indicator "C") results on the borderline between statistical significance and non-significance are established.
- In all examined patients - regardless of the applied method of regenerative therapy, an improvement in clinical and imaging indicators was observed.

The contributions of the dissertation work are also formulated, of which the innovations in the dissertation work are worth noting - for the first time in our country, the effectiveness of the application of autogenous, platelet-rich plasma (on its own) in the regenerative therapy of vertical bone defects is being investigated.

## **Conclusion**

The above gives me reason to accept the dissertation work of  
Dr. Tsvetalina Ivanova Gerova-Vatsova  
on topic

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as a complete and personally done by the doctoral student.

Based on everything noted up to this point, I accept that the requirements of The Law on Academic Staff Development in the Republic of Bulgaria (DASRBA), the Regulations for the Implementation of DASRBA and the relevant Regulations of MU - Varna have been met. The presented materials and dissertation results **fully** correspond to the specific requirements of the MU - Varna.

I support and confirm my positive note for awarding an educational and scientific degree "Doctor " to Dr. Tsvetalina Ivanova Gerova-Vatsova.

06.11.2023  
Sofia

  
Assoc. Prof. Asya Zaharieva Krasteva-Panova, Ph.D