

STATEMENT

by

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Associate professor at the Department of Imaging and Oral Diagnostics,
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Concerning:

For the award of scientific and educational degree "Doctor" in the field:

Higher education: 7. Health and sports.

Professional field: 7.2. Dentistry.

Doctoral Program: "Surgical Dentistry"

A dissertation on the topic:

"Clinical results of application of platelet concentrates in post extraction areas using new platelet rich plasma protocols"

Author:

DR. ATANASKA YORDANOVA CHESHMEDZHIEVA – PhD student at the Department of Oral Surgery, Faculty of Dental Medicine, MU – Varna; Doctoral Program "Surgical Dentistry"

Scientific Supervisor:

Prof. Rosen Kolarov, MD, PhD

1. **Topicality of the topic**

The tissue healing is a major problem in surgical dentistry.

Obstacles to the normal course of the recovery process are superponed infection, used foreign bodies in the form of bone or soft tissue grafts, lack of stability in their fixation, etc.

The topicality of the topic is determined by the fact that oral surgeons are looking for an accelerated and more qualitative process of tissue healing. The introduction into clinical dental practice of autologous platelets isolated and concentrated from one's own blood, together with the growth factors containing them, under the name platelet rich plasma (PRP), contributes to the stimulation of wound healing in the human body and shortens the postoperative period leading to the final anatomical and functional recovery.

2. **Knowledge of the problem**

The PhD student presents a comparative analysis of the methods for the preparation of platelet rich plasma and the influence of platelet concentrates on the tissue healing in the surgical dentistry.

In separate sections, the PhD student also paid attention to healing processes in bone and soft tissue wounds after surgical dental procedures and the mechanism of action of platelet rich plasma.

3. Structure of the dissertation

The analysis of the data in the literature review reflects the excellent awareness of the PhD student about the problem, which is the basis for the correct formulation of the unsolved problems. The purpose and tasks of the dissertation are correctly determined. Following are the methods of research, results and summary of results.

4. Methodology of the study. Purpose, tasks, material and methods

The aim of the dissertation is to be presented clinical results in post extraction areas after surgical removal of lower third molar teeth, using new nationally standardized four protocols for extraction of platelet concentrates from whole fresh autologous blood.

The seven tasks are formed. They follow the idea of the dissertation logically and allow the survey to be carried out.

A working hypothesis is formulated: the standardized for our country new four protocols for extraction of autologous platelet concentrates, with the quantitative fluctuations of the blood components in them, have different degrees of impact on the healing process in the post extraction regions after odontectomy of lower third molars. This brings sufficient clarity to the clinician about the need to apply PRP and what method to obtain it, according to the clinical results that the surgeons seek.

The materials and methods are correctly selected and consistent with the purpose and tasks of the dissertation.

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

5. Results and discussion

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

6. Conclusions and contributions

There are 12 conclusions. They reflect to the results of the tasks in the dissertation. Conclusion 1, as well as conclusion 7 and 8 have particular importance for the practice:

- The use of PC in post extraction defects of the lower wisdom tooth stimulates and optimizes the bone and soft tissue healing process.
- The application of PC improves the comfort of the patient in the early postoperative period, up to 7 days after surgery, as well as profilactates the occurrence of post-surgical complications. The prevention is due to the fact that PRP is a physiological antibiotic – pH 6.6.
- PC also protects the spread of late postoperative complications associated with pathology of the lower molar period when it is added post extraction.

The contributions of the dissertation are also formulated. One of them is an innovation in the dissertation – for the first time in our country it is proposed algorithm of behavior in military pilots who need surgical extraction of lower third molar tooth – to add an autologous PRP in the post extraction defects.

Conclusion

This study presents a variation of the traumatic surgical method of removal of lower third molar teeth, which in a large percentage of cases is associated with a violation of the quality of patients's life. The PhD student proposes to add an autologous platelet concentrates, intraalveolar in post extraction defects. They are extracted according to some of the new standardized for our country protocols and have consequence of stimulating the severe post-extraction period and the absence of complications.

There are 4 scientific publications connected with the dissertation. They are sufficient for the PhD student and the main points of the dissertation are published in them.

The foregoing gives me reason to believe that **Dr. Atanaska Yordanova Cheshmedzhieva** has presented a completed dissertation that meets the requirements of the Regulations for the development of academic staff. I support and confirm my positive vote for the award of educational and scientific degree "Doctor".

Aug 19, 2023

Sofia



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