

OPINION



by Assoc. Prof. Dr. Elitsa Georgieva Deliverska-Aleksandrova, PhD

Department of Dental, Oral and Maxillofacial Surgery,

Faculty of Dental Medicine, Medical University of Sofia member of the Scientific Jury, designated by Order No. P-496/07.04.2021 of the Rector of the Medical University of Plovdiv

on a dissertation for receiving a doctoral degree under doctoral program Oral Surgery, sphere of higher education: 7. Healthcare and Sports, professional field: 7.2. Dental Medicine

Author: Dr. Tanya Ivanova Sbirikova

Form of doctoral study: self-training

Department: Department of Oral Surgery, Faculty of Dental Medicine, Medical University of Plovdiv

Theme: Control of postoperative pain – psychological, fMRI and immunological studies

Academic supervisor: Assoc. Prof. Dr. Deyan Zdravkov Neychev, PhD, Department of Oral Surgery, Faculty of Dental Medicine, Medical University of Plovdiv

General presentation of the procedure and the doctoral candidate

The dissertation consists of 175 pages and is structured properly, in accordance with the accepted academic requirements in our country: introduction; literature review; unresolved problems; objective and tasks; material and methods; results and discussion; conclusions; contributions; bibliography and appendices.

The bibliography of the dissertation includes 271 references, 5 of which are in Cyrillic and 266 in Latin. The dissertation is illustrated with 20 tables, 18 figures, 33 diagrams and 7 appendices.

The doctoral candidate has enclosed 3 scientific publications and 2 participations in scientific forums related to the theme of the dissertation.

Biographical notes of the author

Dr. Tanya Ivanova Sbirikova was born in 1981.

- 2000 - graduated from the French Language School "Antoine de Saint-Exupery", Plovdiv.
- 2001 - Master-Doctor in Dental Medicine, Faculty of Dental Medicine at the Medical University of Plovdiv.
- 2011 - acquired specialty in Oral Surgery, Faculty of Dental Medicine at the Medical University of Plovdiv
- 2012 – 2014 – oral surgeon in the University Hospital "St. Georg" at the Clinic of Maxillofacial Surgery
- Since 2012 – present – has been working in AGPPPD "Charisma" Ltd.
- since 2012 - present - assistant at the Department of Oral Surgery, Faculty of Dental Medicine at the Medical University of Plovdiv.

Dr. Sbirkova conducts practicals and seminars in oral surgery for Bulgarian speaking and English-speaking dental students. She is also actively involved in the practical training for obtaining specialization in oral surgery, and in the implementation of the scientific program of the Department.

Dr. Sbirkova is a leading researcher in a research project on "Objectification of postoperative pain control after extraction of impacted third mandibular molars."

She has a good command of English and French.

Dr. Sbirkova is a member of Bulgarian Dental Association (BDA).

Significance of the dissertation

The presented dissertation work of Dr. Sbirkova has a high degree of relevance and an element of interdisciplinarity - it is an objective modern study of postoperative pain in the context of oral surgery in odontectomy of the mandibular third molars.

The scientific significance of the study is determined by the ability to control and modulate the pain sensation in the early postoperative period. In addition to the daily practice of specialists in oral surgery, the conclusions of the dissertation can be used in the training of students and graduates, as would be of particular interest to general practitioners in dentistry.

Knowledge on the problem

The literature review is purposeful, comprehensive, with good information on the issue.

The doctoral candidate has examined in detail the available literature on the problem. The authors cited, most of whom are from recent years, are leaders in this field, and the design

of the conducted study is based on their experience and the personal clinical experience of the doctoral candidate.

The problems related to pain control, modern diagnostic methods for objectification and, as well as various modalities for control and pain have been studied.

The literature review ends with a critical analysis and clearly motivated unsolved problems on the topic, which give grounds for the development of the present dissertation with main emphasis on:

- Objectification of postoperative pain through the use of modern technologies such as fMRI
- Assessment of the influence of certain factors on the intensity of postoperative pain
- Determination of the relationship between the size of postoperative edema and the intensity of postoperative pain by examining the change in serum levels of CGRP and Procalcitonin.
- Evaluation of the drugs used Placebo, Ibuprofen and Ibuprofen in combination with Gabapentin for the control of postoperative pain by reporting changes in serum levels of CGRP and Procalcitonin.
- Investigation of the possibilities of using CGRP and Procalcitonin as diagnostic markers for a general inflammatory process in the body.
- Assessment of the impact of anxiety and the presence of negative / positive previous experience on postoperative pain.

Emphasis is placed on the need to introduce better pain control in surgical interventions for extractions of third mandibular molars.

The objective of the dissertation was defined correctly:

To study the possibilities for influencing the pain symptoms after surgical removal of impacted third mandibular molars using various drugs, using fMRI, immunological and psychological tests.

Four main tasks were set for its implementation.

Material and methods

The material is sufficient for scientific work and for obtaining reliable results – 40 patients.

The criteria for patient selection in the study and the exclusion criteria for each of the tasks are clearly set. The units and signs are specified, together with the time of observation for the respective tasks.

The methods applied in the development of the set tasks are modern and precisely presented and enable the doctoral student to obtain significant qualitative and quantitative original results. The following were used: clinical, immunological levels of CGRP preoperatively and at 24 hours postoperatively and serum concentrations of procalcitonin, imaging methods - NMR, orthopantomography; psychological and statistical methods.

Analysis of the results and discussion

An in-depth analysis of the results obtained in the three tasks was conducted, and the data regarding each parameter predefined in the methodology of the scientific research was analyzed in detail.

The appropriate graphic presentation and the professional approach of the doctoral candidate in the interpretation of the data obtained make an excellent impression.

The conclusions are **8 and they fully correlate with the tasks set.**

Contributions and significance of the dissertation for the science and practice

The in-depth and professionally conducted study has enabled the doctoral candidate to make a number of original conclusions regarding the pain control and factors which influence it.

The conclusions, impressions and contributions logically follow the results of precisely conducted studies and are undoubtedly significant for the modern clinical practice.

Conclusion

The dissertation is significant, well-structured, with correctly selected methods, reliable results and with theoretical and applied contributions to dental medicine.

The work meets the criteria for a dissertation, has contributions to the daily dental practice and in particular for oral surgery in an outpatient setting, and has a scientific contribution to the Bulgarian research community.

The theme of the scientific work is relevant for the daily clinical practice and shows that the doctoral candidate has good knowledge of the modern specialized literature in its extensiveness and specialization and has good understanding of the methodology for analysis of the results of scientific research. The data from the results make it possible through an

interdisciplinary approach to clarify the factors influencing postoperative pain and to reveal effective ways to control it and thus to a lesser extent affect the quality of life of the patient.

The dissertation contains original and applied contributions and meets all requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria and is **in full compliance** with the particular requirements set in its Implementation Rules as well as with the regulations of the Medical University of Plovdiv.

The dissertation shows that Dr. Tanya Sbirikova **possesses** in depth theoretical knowledge and professional competence in the scientific specialty Oral Surgery and **demonstrates** competences and skills for conducting independent research.

In conclusion, I give my positive opinion on the study conducted, and I will vote positively "yes" for Dr. Tanya Ivanova Sbirikova to obtain doctoral degree under a doctoral program in oral surgery and to obtain the educational and scientific degree "Doctor".

Sofia, 01.05.2021

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(Assoc. Prof. Dr. Elitsa Georgieva Deliverska-Aleksandrova, PhD)

