

REVIEW

on the dissertation on the topic:

POSSIBILITIES FOR LASER REJUVENATION AND AESTHETICIZATION OF FACIAL SKIN

of Dr. Julian Zlatkov Penev

presented for the award of educational and scientific degree "DOCTOR"

by Assoc. Prof. Dr. Razvigor Borislavov Darlenski, MD, PhD, DrSci

Department of Dermatology and Venereology, Thracian University - Stara Zagora

By decision of the Academic Council of MU-Varna and order of the Rector number № P-109-152/13.04.2022, I was elected a member of the scientific jury for evaluation of the scientific work of Dr. Julian Zlatkov Penev, presented for the award of educational and scientific degree "DOCTOR"

1. Professional development and scientific activity:

Dr. Julian Zlatkov Penev completed his higher education in medicine at MU-Varna. Since he was a student, he has been interested in the field of lasers, developing a copper halide laser independently on the basis of his own laser tube construction and power supply, in line with TNTM. He was awarded a gold medal for the construction of a pulsed nitrogen laser and excitable adjustable dye lasers in the entire visible range of the National Exhibition for TNTM, Plovdiv, 1979. In 2004 introduces for the first time in Bulgaria a method for rejuvenation of facial skin with deep ablative resurfacing with CO2 laser. He received a patent "FasetLift" under number 103448 / 22.10.2018 of the Patent Office of the Republic of Bulgaria.

2. Analysis of scientific work

Actuality

The present dissertation focuses on laser therapy of dermatoses located on the head and neck with a carbon dioxide laser. These include dermatoses that are difficult to respond to therapeutic methods or scarring after them is aesthetically unacceptable for the patient - acne, multiple seborrheic and solar keratoses, hyperpigmentation, hemangiomas, keloids, scars after burns, trauma and surgical removal, facial removal and surgery. of aging skin (fine lines, deep wrinkles, elastosis and melasma).

The aim of the dissertation is to optimize, analyze and summarize the therapeutic options for aestheticization and rejuvenation of facial skin with CO2 laser effects with specific techniques and typical clinical cases in anatomical areas of the head. The subject of the work is analysis and summarization of own clinical experience in laser-based methods for aestheticization and rejuvenation of facial skin and their therapeutic range for real application and potential. Therapeutic range and effectiveness in removing a number of dermatoses that compromise facial aesthetics are outlined.

Evaluation of the dissertation

The hypothesis of the dissertation work assumes that optimizing the laser effects (ablative, thermolysis, and fractionation) can remove unaesthetic formations from the face without rough

scarring, improve the structure and elasticity of the skin and achieve visible and lasting reuvelinization, which affects positive self-esteem and hence the quality of life.

An author's laser procedure for effective treatment of adulterous and prolonged juvenile acne and erasure of its scars, an author's biophysical model optimizing the results of the ablative laser resurfacing procedure, and a clinical protocol for the deep ablative laser resurfacing procedure are presented.

The relevance of the dissertation stems from the understanding of the importance of the quality and appearance of facial skin as an important factor for self-esteem and social life, confidence and self-realization of the individual. Eliminating the visible signs of aging, removing unsightly dermatoses and those associated with old age can actually increase self-esteem and quality of life. The significance of the dissertation is determined in theoretical and practical terms.

The dissertation contains 233 standard typewritten pages and is illustrated with 188 figures, 2 graphics, 7 tables and 6 appendices, containing additional photo documentation, references to previous authorial contributions. The literature reference includes a total of 105 literary sources, of which 20 in Cyrillic and 85 in Latin.

The literary review is written in a high scientific style and shows in-depth knowledge of Dr. Penev on the problem. It summarizes and analyzes scientific information, giving reason to conclude that there is a need to study the problem.

Based on the literature review, the purpose of the research and the tasks are logically formulated. Materials and methods are written in detail with a detailed description of the methods used. The description of the groups of studied patients is comprehensively presented in the results, as various research approaches are skillfully applied. The results are presented in detail, arranged according to the formulated tasks and including methods, results and discussion.

The contributions made by Dr. Penev are significant:

- 1. A clinically tested new therapeutic approach for non-drug definitive treatment of exacerbated juvenile and adulatory acne has been developed*
- 2. A clinical protocol has been established for the procedure for rejuvenation of the facial skin with deep ablative laser resurfacing.*
- 3. A therapeutic plan has been created with a effectively optimized clinical protocol for complete aestheticization and rejuvenation of the facial skin with laser methods.*

3. Critical remarks

To replace the term "aestheticization", as it is absent in the terminological dictionary of the Bulgarian language.

There is no list of publications and participation in scientific forums in the abstract.

A complete correction of formatting / style / spelling errors is desirable.

To shorten the abstract from the initial 140 pages.

4. Conclusion

I positively evaluate the presented dissertation. The basis for this assessment is the relevance of the issue, the importance of the goal and objectives, the modern methodological approach used, the required amount of accurately performed and interpreted research work. The topic is undoubtedly relevant, the study has a scientific and practical focus. The dissertation of Dr. Penev demonstrates the commitment and competence of the author and shows his serious and in-depth scientific and scientific-practical interest in this important topic.

The qualities of the dissertation, taking into account the critical remarks made, as well as the requirements for the necessary quantitative and qualitative criteria according to ZRASRB, PPZRASRB and the Regulations for the development of academic staff at MU-Varna, give me a reason to vote positively and propose to esteemed members of the scientific jury to award Dr. Julian Penev the educational and scientific degree "DOCTOR".

3.5.2022