

STATEMENT

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Subject: the scientific work of D-r Petko Ganev on the topic "THERAPEUTIC POSSIBILITIES OF CRYOABLATION IN LOW BACK PAIN" for obtaining the educational and scientific degree "Doctor".

Low back pain is the most common condition affecting the vast majority of people of working and retirement age in the world. Nowadays, with the introduction and development of new methods and technologies, the minimally invasive treatment of the spine affected by the degenerative process occupies a leading place among the treatment methods. This principle of treatment is among the leading trends in modern medicine. Low lumbar pain leads to gradual disability of the patient if appropriate measures are not taken.

It is to this topical issue that the scientific work of Dr. Ganev, presented for review, entitled "THERAPEUTIC POSSIBILITIES OF CRYOABLATION IN LOW BELT PAIN" is dedicated.

The scientific work has a volume of 138 pages and is presented in the classic structure for a dissertation - literature review, set goals, own material, analysis of results and complications, introduction, historical data, anatomy and biomechanics of the lumbar spine, etiology of LBP, research methods, treatment methods, purpose, tasks, material and methods, conclusions, discussion and bibliography. Undoubtedly, this allows systematic monitoring of both the various components of the issue and the personal experience of the author..

The goal set by the author is short and clear - **To study the possibilities of the method of cryoablation in the treatment of low back pain and its maximum rationalization.** In view of the set goal, the author sets 4 main scientific tasks for solution. They are logically justified, derive from the set goal and are actually feasible. This is reflected in Chapter 7.

The literature review covers 5 Pages. The quotations used are 185, of which 6 are in Cyrillic and 179 in Latin. It presents both the classic publications on the topic

and the modern publications dedicated to cryoablation in the Discussion Chapter. The cited publications are from authoritative scientific journals. The reading of the literary sources is presented correctly and critically, as in each section an analogue is made in the world tendencies, considered by the cited authors. This makes the review especially useful for anyone interested in the problem.

Chapter 8 describes the author's material, covering 218 patients with low lumbar pain, treated at the Clinic of Orthopedics and Traumatology at the University Hospital "St. George" - Plovdiv for a period of 4 years. The patients are divided into groups according to the set goals. The Visual Analogue Scale (for determining the severity of pain) was used to evaluate the results, as well as the SF-36 system and the Oswestry Disability Index for determining changes in quality of life. The data are processed and systematized using the established statistical methods.

The etiological variants of lumbar pain are indicated and the cases in which the method is the most effective are highlighted. The most rational method for performing the procedure is proposed. Here, the reader interested in the problem will undoubtedly appreciate the great practical significance of the presented work.

Especially valuable for the practice are the presented options for visualization of the spine and the placement of the probe, as well as their pros and cons, as the choice of option has a significant contribution to achieving good end results.

In Chapter 8, the author combines cryoablation with another treatment method, namely: balloon kyphoplasty. It is completely logical to consider the subjective perception of the patients both in the combination of kyphoplasty with cryoablation, and in its independent application, which gives the necessary objectivity.

The achieved results are completely similar and comparable to those from the literature and factually support the main thesis of the author, namely that cryoablation is an effective, minimally invasive method for affecting low back pain and favorably affects the quality of life of patients.

The initial remarks are adequately addressed. An excellent impression is made by the rich illustration with radiographs, which well illustrates the work of the author, as well as many illustrations personally drawn by the author.

The results achieved by Dr. Ganev are convincing and prove the effectiveness of cryoablation in the treatment of low back pain.

With Chapter 10 the scientific work ends, presenting 9 correct conclusions especially valuable, both for the orthopedic-traumatological and for the general medical practice with which I absolutely agree.

The bibliography with its comprehensiveness deserves special attention and is of particular benefit to any physician interested in the problem. Both classic publications and the latest scientific developments are indicated. The cited publications are from the most authoritative sources.

Assessing the high theoretical and practical value of the presented work, I fully accept its contributions, namely:

- For the first time in our country the effectiveness of cryoablation in the treatment of low back pain is being purposefully considered.

- The anatomical, etiological, biomechanical and biological aspects of the problem are analyzed in detail and on the basis of a wide literature review the possibilities, advantages and disadvantages of the different methods of treatment are considered.

- For the first time in the country, cryoablation of the medial branch of Ramus dorsalis is being tested and put into practice in a large contingent of patients with low back pain.

- The benefits and advantages of the method are specified.

- Not only the subjective perception of pain is considered, but also the change in the quality of life of patients.

- Based on theoretical and clinical studies and the results obtained, it is established that cryoablation of the medial branch of Ramus dorsalis is an effective method of treatment of idiopathic forms of lumbar pain and a good alternative in many surgical conditions of the lumbar spine.

On the topic of this paper, Dr. Ganev has 5 publications, one of which is in Latin and 4 in Cyrillic.

Conservative methods of treatment of this disease, have not been considered in sufficient depth which does not diminish the value of the proposed scientific work, have not been considered in sufficient depth.

Conclusion: The paper presented by Dr. Petko Ganev on the topic "THERAPEUTIC POSSIBILITIES OF CRYOABLATION IN LOW BACK PAIN" for obtaining the educational and scientific degree "Doctor" considers a current problem in medicine.

The scientific work is excellently structured and richly illustrated with 72 figures and 19 tables. The goal is clearly formulated and the set tasks are adequate and optimal for its achievement.

The clinical material is sufficient in volume, which allows correct and reliable scientific judgments. Contributions and conclusions important for the practice have been made.

The presented results are the personal work of the author and are comparable to those cited by the most authoritative scientific sources and schools.

Due to all this, I believe that the dissertation of Dr. Ganev meets all the requirements for obtaining an educational and scientific degree "Doctor" and I strongly suggest its award.



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