

**TO: DOCTORAL SCHOOL DEPARTMENT**

**M U - VARNA**

In accordance with **ORDER № P-109- 14/12.01.2023**

**of RECTOR of M U, VARNA - 14. VARNA**

**STATEMENT**

By Prof. Dr. Rossen Evgeniev Madjov, MD, PhD, DSc

Head of the Department of Surgical Diseases

Head of the 2<sup>nd</sup> Clinic of Surgery

**Subject:**

Dissertation defense of Dr. Rumen Dimitrov Runkov

**"LATE REVASCULARIZATION IN PATIENTS**

**WITH ACUTE ARTERIAL ISCHEMIA OF THE EXTREMITIES"**

for obtaining the degree of "Doctor of Medicine"

The submitted dissertation of Dr. Rumen Runkov is in a form and volume that meets the requirements of the Law and the Regulations of the Medical University - Varna. It is printed on **179** pages, structured stylistically correctly and in very good language. It is illustrated with **43** figures, **80** tables and one annex. The bibliography comprises **182** titles, of which **7** in Cyrillic and **175** in Latin.

The dissertation was discussed, accepted and directed for defense by the Department of Cardiovascular Surgery and Angiology and approved by the Faculty Council of the Faculty of Medicine at MU - Varna (09.01.2023).

The main aim of the dissertation was "*to study comparatively our results of early and late revascularization in patients with acute arterial ischemia of the extremities*".

For the optimal solution of the main goal, the author has defined **6** tasks, which are well formulated and the development of the dissertation follows their logical solution.

## **1. Evaluation of the relevance of the topic**

Acute arterial insufficiency of the extremities or acute limb ischemia is a serious and rapidly progressive disease of the vascular wall that immediately threatens the life of the patient and requires timely, accurate diagnosis and adequate treatment. The main causes are acute thrombosis, embolism and arterial trauma. Despite modern advances, with a view to rapid and accurate diagnosis and improvement of comprehensive complex treatment, the results still do not fully meet expectations.

At present, various methods are used with a view to conservative or surgical restoration of arterial blood flow in the extremities - thrombolysis, anticoagulant, antithrombotic and endovascular therapy, as well as for surgical revascularization, angioplasty, stenting and bypass grafts. Early revascularization is most effective, but unfortunately, most patients present late and this leads to unsatisfactory treatment outcomes. Taking into account the continuous ageing of the population and the increasing incidence of cardiovascular disease worldwide, the problem is of considerable socio-economic importance in addition to its medical significance.

## **2. Evaluation of results**

In the thesis 273 patients with acute limb ischemia who passed through the "St. Panteleimon" Yambol for the period 2011 - 2020 and underwent early or late limb revascularization. Patients were followed retrospectively by documentation and divided into four groups - due to thrombosis of one or several arteries; due to embolism; due to trauma and with limb amputation.

Foot-brachial and carpal-foot index values increased after surgical intervention. The effect of surgical re-vascularization was reported according to the levels of these values reached. Subsequently, at follow-up examinations, new measurements are performed and the results obtained are compared.

The complete restoration of blood flow in the affected limb and the normalization of the clinical characteristics and indices of the other examinations, and the improvement express the recovery of the patients by the presence of some residual functional impairment and insufficiently restored blood flow in the control examinations.

Healing was observed statistically significantly more often after late revascularization with standard and distal accesses than after late revascularization with standard accesses only, and improvement was observed in the majority of patients, but most often after early intervention /at 78.78%/.

Dr. Runkov developed and implemented in clinical practice his own algorithm of management of patients with late revascularization of the limbs with acute arterial ischemia. It has good efficacy and safety in adult patients with acute arterial ischemia.

### **3. Conclusions and contributions of the dissertation work**

The conclusions of the dissertation on the topic of the scientific work are 5 in number and are based on the comprehensive analysis of the information on the literature review, clinical material, analysis and discussion of own results. They are well formulated and reflect an essential part of the analyzed sections. They are mainly of confirmatory and practical value.

Contributions of the dissertation work made by Dr. Rumen Runkov total 6, of which 2 are of original scientific and applied nature, 4 - of confirmatory nature.

#### **4. Author summary**

The author summary accurately and correctly reflects the main parts and sections of the thesis. Both the dissertation and the abstract are written in clear and correct Bulgarian language and well styled and illustrated.

#### **5. Publications related to the dissertation topic**

Dr. Rumen Runkov has submitted a list of 3 publications in medical journals on the topic of the dissertation in which he is the first author.

#### **6. Conclusion**

In my opinion, this is a complete and well-structured dissertation, in a form and volume fully complying with the requirements of the Law, the Regulations for its application and the Regulations of the M U - Varna.

The topic is relevant and of clinical importance in modern vascular surgery and angiology. It reflects the results of a surgical structure, containing scientific and practical results that represent contributions of confirmatory and scientifically applied nature of the author.

Taking into account the professional development and publication activity as well as my overall evaluation, I recommend the esteemed members of the National Council of Sciences to vote positively and to award Dr. Rumen Runkov the degree of Doctor of Medicine in the scientific specialty of surgery.

06.03.2023 г.

Varna

With respect:

Prof. Dr. Rossen Madjov, MD, PhD, DSc

