

Opinion

On dissertation submitted in particular fulfillment of the requirements for the degree of Doctor of Medicine in the scientific field 7.1 General Surgery; Medicine in the higher education field 7. Healthcare and sport.

Author of dissertation thesis: D-r Sultana Bozhidarova Karamanova-Piperkova

Title of dissertation thesis: **Traumatic lesions of the blood vessels of the extremities. Diagnostic and surgical problems.**

Member of the scientific jury: Prof.Dimitar Radkov Radenovski, PhD. The jury was defined by letter of appointment № RD-26-2087/05.10.2022 UMHATEM “N.I.Pirogov”

Biographical data and education

D-r Sultana Karamanova was born in Burgas, where she graduated from English Language Medium School “Geo Milev”. In 2012 she graduated her higher education from Medical University Sofia. In 2019 she made a speciality of “Vascular surgery”. 2015-2021 she completed many qualification courses in the field of vascular traumatism. D-r Karamanova started her professional life in 2013 as an intern in the Vascular Surgery Department in UMHATEM “N.I.Pirogov” – Sofia, where she is still working as a well-known specialist. She is a member of the Bulgarian Doctors Community and the National Community of Vascular and Endovascular Surgery and Angiology. She speaks English and German.

Dissertation thesis

The dissertation thesis is about one of the main and complicated problems of modern medicine – vascular traumatism of the extremities. The author makes clear analysis of the difficulties which are as a result of late diagnosis, lack of strict organization of the emergency healthcare system and inadequate distribution of qualified surgeons, who can perform surgery in first 4 to 6 hours. During this period, we can achieve full functional recovery of the extremity. The aim of the research is defined precisely – to analyze the authors’ clinical experience with traumatic lesions of the vessels of the extremities in order to improve the diagnostic options and the results after surgical treatment.

Eight tasks were fulfilled to complete the main aim of the dissertation:

1. To research the quantity and distribution of the traumatic lesions of the vessels of the extremities in our country;
2. To analyze the etiological connection between the trauma itself and its clinical presentation and pathologoanatomical substrate;
3. To investigate the opportunities of the clinical and instrumental methods of diagnostic in traumatic lesions of the vessel of the extremities and to confirm the most informative ones;
4. To set the sequences of treatment activities in patients with multiple trauma;
5. To differentiate the strategy and choice of surgical method in patients with trauma of the vessels of the extremities;
6. To evaluate the different operative methods performed during the treatment of the patients with traumatic lesions of the vessels of the extremities;
7. To research the early and late results after surgical treatment of the traumatic lesions of the vessels of the extremities and to define the influence of the concomitant vascular pathology and other risk factors on them;
8. To make an algorithm for optimal diagnostic and treatment in patient with different kind of vascular trauma of the extremities.

The clinical material included in the research is enough to support the final results which are obtained by conducting prospective and retrospective research. It consists of a group of 124 patients with traumatic lesions of the main blood vessels of the the upper and lower extremities which were treated and followed up from April 2010 to December 2019. They are divided as follow: 71 patients with vascular trauma of the upper limbs, 51 - of the lower limbs and in two cases both (upper and lower) extremities were affected at the same time. The individual affected vessel was examined as a statistical unit of the research. All patients were treated in the Vascular Surgery Department at UMHATEM "N.I.Pirogov". The author was operator in 72 % of the cases.

On the grounds of the deep analysis of the collected and researched material and her rich experience, the author presents algorithms of diagnosis and treatment in such patients which have high scientific and practical value. The dissertation thesis offers 15 thorough conclusions which lead logistically to four contributions of the dissertation:

1. For the first time in Bulgaria the problems of the diagnostic and surgical treatment of the vascular traumas of the extremities and the results after surgery were examined.
2. Using statistical methods, tests and analyses
 - The main risk factors for intra- and postoperative thrombosis were determined;
 - The role of the concomitant deceases in the intra- and postoperative thrombosis was clarified.

3. The long term results after surgical treatment of the vascular trauma of the extremities were followed up in the duration of 1 to 3 years;
4. Diagnostic and treatment algorithms for patients with vascular trauma of the extremities were created. They may be used as a protocol of action by specialists working at trauma centers.

In conclusion, my opinion is that d-r Sultana Bozhidarova Karamanova's dissertation thesis on **"Traumatic lesions of the blood vessels of the extremities. Diagnostic and surgical problems"** shows serious approach to this surgical problem and succeeds in creating algorithms for diagnosis and treatment which are based on rich experience and significant volume of medical information. It is highly valued in medical practice.

The author of the dissertation shows serious scientific knowledge which with no doubt lifts the dissertation to a higher level. Because of these reasons and because I believe that the dissertation meets all the requirements of The Law for Development of Academic Staff in Republic of Bulgaria and of The Regulations of the Development of the Academic Staff in UMHATEM "N.I.Pirogov" – Sofia I am proposing to the members of the Scientific jury to award D-r Sultana Bozhidarova Karamanova-Piperkova the scientific degree "Doctor of Medicine" in the professional field 7.1 General Surgery.

Yours sincerely,

Prof.D-r Dimitar Redenovski, PhD