

Review

of the dissertation work and author's dissertation abstract entitled

Operative treatment of carotid arteries in multifocal atherosclerosis

presented for public presentation before a Scientific jury
for the acquisition of the educational and scientific degree of 'doctor of
philosophy' in the field of higher education No 7. Public health and sports,
professional trend No 7.1. Medicine and
scientific specialty of 'Surgery'

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The dissertation work is type-written on 205 standard pages. Its structure contains
all the sections inherent to a similar work as follows:

- Contents - 3 pages
- Abbreviations used - 1 page
- Introduction - 2 pages
- Review of the literature - 60 pages
- Purpose and tasks - 1 page
- Material and methods - 20 pages
- Own results - 55 pages

- Discussion - 45 pages
- Concluding remarks - 2 pages
- Conclusions - 1 page
- Literature - 23 pages
- List of publications related to the dissertation - 1 page
- Contributions of the dissertation - 1 page.

The dissertation is illustrated with 30 tables and 105 figures. The reference list includes 230 source titles, of which there are 26 in Cyrillic and 204 in Latin. Most publications cited have been published during the last three years.

Brief PhD student's biographical data

Emil Dimitrov Jordanov, MD, was born on August 2, 1976 in the city of Varna. He graduated from the First English and German Language Secondary School in Varna. In 2001, he graduated in the specialty of medicine from the Medical University 'Professor Paraskev Stoyanov' of Varna. He acquired the specialties of 'Surgery' in 2007 and of 'Vascular surgery' in 2012. During the period between 2001 and 2006, Emil Dimitrov Jordanov, MD, was a post-graduate student in surgery at the Department of General and Operative Surgery, St. Marina University Hospital of Varna. Since 2006 until present, he works as surgeon and vascular surgeon at the Department of Cardiovascular Surgery and Angiology, St. Marina University Hospital of Varna. He was on specialization assignments in the city of Milan, Italy, in the town of Pontresina, Switzerland and in the city of Prague, Czech Republic. Emil Dimitrov Jordanov, MD, performs Bulgarian- and English-language education in the form of exercises in general surgery with the students in the specialty of dental medicine as well as in vascular surgery with the students in the specialty of medicine. He is fluent in English and German languages.

Actuality of the dissertation

The dissertation is devoted to an actual topic in vascular surgery. Carotid endarterectomy and carotid stenting with angioplasty are modern and life-saving surgical methods of treatment of the carotid arteries and carotid bulbs in the patients with atherosclerosis of these and of the arteries in other vascular basins. The important

role of the early imaging diagnosis in the patients with carotid atherosclerosis is outlined.

Review of the literature

The review of the literature represents a profound analysis of the contemporary publications by foreign and Bulgarian authors on these socially significant problems. It is an appropriate basis for the substantiation of the necessity for the performance of PhD student's investigation.

The purpose of the dissertation is clearly presented: „To study in a comparative aspect our results from the application of the carotid endarterectomy and the carotid stenting with angioplasty in the patients with carotid atherosclerosis“. Six tasks are formulated for the achievement of this purpose. Their accomplishment sheds light not only on the role of the timely imaging diagnosis of the carotid artery lesions but also on the effectiveness and safety of the carotid endarterectomy and the carotid stenting with angioplasty as well as of the additional surgical methods applied in a diagnosed damage of other surgical basins, too.

Material and methods

The dissertation is completely up to standard in methodological respect.

It deals with a total of 199 consecutive patients operated on during an eight-year period. They have been preoperatively diagnosed by means of modern imaging methods such as computed tomography-assisted carotidography, Doppler sonography of the carotid arteries, diagnostic angiography and computed tomography of head/brain. A satisfactory specifying of the severity and localization of the pathological process has been achieved. Some 107 patients have undergone carotid endarterectomy and 92 patients have undergone stenting with angioplasty.

Results

Within five chapters, a series of various distributions of the analyzed patients are presented, namely, according to gender, age, localization of the lesions of the blood vessels, applied diagnostic imaging methods, kind of the operative intervention, number of complications and accompanying diseases.

The numerous results obtained are very well systematized and illustrated with figures and tables. Their convincingness is supported by the proved essential statistical dependences. An effective restoration of the blood flow of the stenosed carotid arteries and carotid bulbs is achieved. Carotid endarterectomy is predominantly applied in carotid artery lesions while PTA and stenting is done in case of involvement of the carotid bulbs. Early postoperative complications are very seldom in spite of the considerable incidence rate of the serious chronic accompanying diseases as an illustration of the multifocal atherosclerosis in most patients.

Discussion

The discussion consists of four chapters. It follows the logic of the investigation. PhD student's results are compared with those of the other authors on this theme.

In the concluding remarks of the dissertation, the most significant results of the study are generalized.

Six concrete conclusions are formulated. They correspond to the tasks set.

Contributions

The PhD student claims five scientifically applicable contributions of confirmatory nature and I agree with them. I accept that they are his personal deed and merit and could contribute to further development of the research related to the practical usage of these surgical methods in the clinical practice in our country.

The author's dissertation abstract is structured in accordance with the requirements for volume, structure, and contents. It objectively reflects the primary results and scientific contributions in the dissertation work.

The PhD student has published two independent scientific articles on the topic of the dissertation work in 2021. This meets the normative requirements.

Conclusion

The dissertation 'Operative treatment of carotid arteries in multifocal atherosclerosis' completely meets the requirements of the Law for development of the

academic staff in the Republic of Bulgaria. This is an up-to-date, well-planned and accomplished scientific work.

I am convinced it deserves my positive evaluation .

I propose to the honored members of the Scientific jury to award the educational and scientific degree of ‘doctor of philosophy’ in the scientific specialty of ‘Surgery’ to Emil Dimitrov Jordanov, MD.

January 20, 2022

Sofia

Reviewer:



(Prof. Vassil Jordanoff Chervenkov, MD, PhD)