



STANCE

from Prof. Dr. Angel Petrov Uchikov, DMedSc
Head of the Department of Specialized surgery in the Medical
University of Plovdiv and Scientific supervisor of the doctoral
candidate

for Dissertation thesis for awarding an educational and scientific degree "Doctor of sciences"

Professional field of *Medicine*

Doctoral program *Thoracic surgery*

Author: *Dr. Yordan Toshev Tsenovski*

Theme: "The role of lymphovascular invasion in the prognosis of oesophageal carcinoma"

1. General presentation of the procedure and the doctoral candidate

The submitted set of materials on paper and electronic media is in accordance with Article 115 (1) of the Procedure for Acquisition of educational and scientific degree "Doctor" in Medical University of Plovdiv; the Regulations of the Medical University – Plovdiv from 06.11.2014 and includes the following documents required for the procedure:

Application to the Rector of the Medical University of Plovdiv for disclosure of procedure for defence of dissertation thesis

- CV in European format with the signature of the doctoral candidate;
- Notarized copy of the Diploma for higher education;
- Orders for enrolment in doctoral studies and right to defend the dissertation thesis;
- Order for the conduct of examination from the individual plan and the respective protocol for successful completion of the doctoral minimum in the specialty;
- Protocol from the department council meeting for preliminary discussion of the doctoral dissertation and the decisions taken for opening the procedure and for the composition of the scientific jury:

- Dissertation thesis;
- Author's abstract;
- List of the scientific publications on the dissertation topic;
- Copies of the scientific publications;
- List of participations in scientific forums;
- Declaration of originality and authenticity of the attached documents;

The Doctoral candidate has submitted copies of ... publications, all in peer-reviewed journals, in which he is the first author. The documents are clearly arranged and presented.

Dr. Yordan Toshev Tsenovski is born on 30.05.1971 in the town of Oryahovo. He graduates in medicine in 1995 at the Medical University of Varna. During the period 1998-2013 he works in First and Second surgical clinics of "Pirogov" hospital – Sofia, where he acquires a specialty in General and thoracic surgery. Currently he works in two places, as a Head of the surgical Department at the Mezdra hospital and as a resident doctor in the Department of Thoracic surgery at the hospital "G. Stranski" – town of Pleven.

Dr. Tsenovski is a member of the Bulgarian Surgical Society and the Bulgarian Society of Thoracic and Cardiovascular Surgery. Since 2015, he is member of the advisory board for thoracic surgery at the Bulgarian Medical Union.

2. Evaluation of the submitted dissertation work

The problem of the surgical treatment of oesophageal cancer is still relevant today and causes disagreement among surgeons. With the introduction in clinical practice of extended lymph dissection, this area of surgery has become significantly more complicated due to the emerging need to separate the regional lymph nodes on both sides of the diaphragm. The problem of metastasis and lymph dissection is important and has not yet been resolved, there are dynamics in staging and classifications that have changed in recent years, the volume of lymph dissection is disputed and the same is valid for chemotherapy. A number of authors note that the last eighth classification of the TNM system of AJCC and UICC from 2017 is not satisfactory and complete to take into account all the factors characterizing oesophageal cancer. The search for the creation of a more complete and optimized evaluation system continues. Undoubtedly, the characteristic lymph flow underlies the specific features for the spread of oesophageal carcinoma. Modern oncological diagnosis has an integrative character. It aims to bring together the exact diagnosis, determined by image-diagnostic methods and obligatorily

by pathomorphological verification, with the prognostic and predictive factors. The latter are determined by the histological type of the tumour and the extent of its spread.

The lymphatic vascular invasion (LVI) is an important element of the tumour progression and is defined as an independent prognostic factor in many tumours. Based on the assumption that the appearance of LVI is an essential sign for the start of aggressive behaviour of the carcinoma, it is very important to study its role for the progression of the oesophageal carcinomas, for the oesophagogastric connection in different stages of the tumours and in different histological types, comparing their presence with the lymphogenic metastases.

The dissertation thesis of Dr. Yordan Tsenovski is written on 192 pages; it has 14 appendices and is illustrated with 7 tables, 55 figures and 23 photos. The bibliography contains 178 sources. The structure of the research is: introduction - 3 pages, review of the relevant literature - 56 pages, purpose and tasks - 1 page, materials and methods - 62 pages, results and discussion - 37 pages, conclusions - 2 pages, contributions - 1 page, bibliography - 18 pages, appendix 10 pages.

The purpose is clear and three tasks are logically formulated.

188 patients with oesophageal cancer are analysed, treated and operated in First Surgical Clinic of "Pirogov" Hospital - Sofia. The author presents an ambispective analysis of the operated patients for 6 years. In all cases, a complete lymph dissection was performed in two areas (abdominal and thoracic) with removal of at least 15 lymph nodes. The concepts of "skip metastasis" and lymph node ratio are introduced, a tray is proposed for mapping the lymph nodes during their surgical removal in cases of oesophageal carcinoma.

Dr. Yordan Tsenovski presents the results in 7 tables and 55 figures, distributing and analyzing the results of lymph dissection by areas /neck, chest and abdomen/. Separately, he describes the metastases and the routes of metastasis in the different localizations of oesophageal carcinoma. Based on this, he proposes a modified classification of the oesophageal carcinoma.

Lymphatic vascular invasion in adenocarcinoma with lymphogenic metastases (N1-N3) and without lymphogenic metastases (N0) are studied separately. Lymphovascular invasion in squamous cell carcinoma with lymphogenic metastases (N1-3) and, respectively, without lymphogenic metastases (N0) is studied according to the same pattern.

The author shows in-depth reflections and conclusions about the results obtained. He draws conclusions for the complex assessment of lymphatic dissection in oesophageal carcinoma and for the Lymphatic Vascular Invasion. The conclusions are presented in detail.

3. Contributions

1. A new application for evaluation of lymphatic metastasis with lymphatic dissection of oesophageal carcinoma has been proposed based on the combination of two internationally accepted classifications /for the abdomen - the Japanese, for the chest - of Mountain and Dressler/.
2. A precise scheme for lymph node mapping is applied.
3. A broader approach to D1, D2, D3 lymph dissection is proposed – the so far D1-dissection in one area, D2-dissection in two areas, D3-dissection in three areas, considering that there may be D1 D2 D3 dissection in all three areas as per the Japanese classification.
4. Technical description of the surgical intervention for the new D1 D2 D3 dissection.
5. Indications and methods for performing D1, D2, D3 lymph dissection are developed.
6. The examination of the lymphatic-vascular invasion determines the adjuvant therapy and the prognosis of the oesophageal carcinoma.

4. Conclusions

The doctoral candidate has performed in-depth and precise retrospective and prospective studies of good scientific and practical value. The exposed 13 conclusions correspond to the objectives proposed. The presented work is a contribution that improves the staging, prognosis and complex treatment of the oesophageal carcinoma.

IN CONCLUSION, the submitted for review dissertation thesis on the topic: "THE ROLE OF LYMPHOVASCULAR INVASION IN THE PROGNOSIS OF OESOPHAGEAL CARCINOMA" has a significant scientific and practical potential.

I strongly recommend the esteemed members of the scientific jury to vote positively for the award to Dr. Yordan Toshev Tsenovski the educational and scientific degree "Doctor of sciences".

11.08.2020

Town of Plovdiv

Prof. Dr. Angel Uchikov, DMedSc

