



REVIEW

by

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of

the dissertation thesis of Dr. Yordan Toshev Tsenovski,

PhD student at the Department of specialized surgery,

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on:

THE ROLE OF LYMPHATIC VASCULAR INVASION IN

THE PROGNOSIS OF OESOPHAGEAL CARCINOMA

for awarding an educational and scientific degree

“DOCTOR OF SCIENCES”

The dissertation thesis of Dr. Tsenovski Yordan consists of 192 pages with 14 appendices, 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 dissertation thesis is approved and admitted for official defence by an extended department council of the Department of Special Surgery, Medical University - Plovdiv.

The dissertation thesis has a surgical character and is dedicated to the problems related to the surgical behaviour in patients with oesophageal cancer in both stages - with and without metastases /phase N0 and N1-N3/. The incidence of malignant neoplasms tends to increase both in the Republic of Bulgaria and globally. In a large majority of patients, the diagnosis of the malignancy coincides with an advanced stage of its development. Another part of the patients undergoes radical treatment for a primary tumour, but in different periods after the treatment the tumour recurs locally and/or distant metastases appear. Untimely diagnosis is the reason for the detection of the malignant process in an advanced stage, with germination to the neighbouring structures and organs and with the presence of distant metastases.

## REVIEW OF THE RELEVANT LITERATURE

The literature review occupies 56 pages. It covers a significant part of the total volume of the thesis and deals with all aspects of the problem.

It begins with a brief introduction to the etiopathogenetic mechanisms and routes of dissemination in oesophageal carcinoma. Clinical, imaging, instrumental and laboratory methods in the diagnosis of metastases and lymphatic vascular invasion in oesophageal carcinoma are thoroughly investigated. The thesis examines in detail current aspects of the surgical approach and the volume of surgical intervention in patients with oesophageal cancer. The criteria for undergoing surgery are listed. Data from the world medical literature related to the anatomy of the lymphatic system of the oesophagus, lymphatic vascular invasion, directions of metastasis, 2 and 3 regional lymph dissection are presented in detail. Skip metastases, lymph node ratio, and lymph nodes are considered as independent prognostic factors.

The OBJECTIVE of this study is to investigate the role of the lymphatic vascular invasion in the progression of the two main types of carcinoma – oesophageal and of the oesophago-gastric junction – in different stages of the tumour and in connection with the lymphogenic metastasis. The other purpose is to evaluate the possibility of lymph dissection according to the type of surgical intervention.

The objective is clear, realistic and through the logically formulated three tasks, the author's aspiration is evident to show the real significance of the problem of the lymphatic vascular invasion in oesophageal carcinoma.

## MATERIAL AND METHODS

The thesis presents 188 cases of patients, treated and operated for oesophageal cancer in the First surgical clinic of "Pirogov" Hospital - Sofia. An ambispective analysis is carried out of patients operated in the last 6 years, of which 2 years retrospectively, according to documents, and 4 years prospectively, according to the performed operative interventions. Lymphogenic metastases are evaluated on 29 indicators.

Of these, 50 cases are studied to investigate the role of lymphatic vascular invasion in the prognosis of oesophageal carcinoma. In 18 cases the tumours are in stage N0 and 32 - in stage N1-N3.

## METHODS

Histological methods are applied - routine histological examination with Hematoxylin and eosin stain, Pas reaction and immunohistochemical examination where necessary. Immunohistochemical examinations were performed on formalin-fixed and paraffin-

2. A broader approach to D1, D2, D3 lymph dissection is proposed, considering that there may be D1, D2, D3 dissection in three areas, as per the Japanese classification.
3. Indications, technical description and methodology of performing D1, D2, D3 lymph dissection are developed.
4. The examination of lymphatic-vascular invasion determines the adjuvant therapy and the prognosis of the oesophageal carcinoma.

#### CONCLUSION

The doctoral student has performed in-depth and precise retrospective and prospective studies with good scientific and practical value.

The presented 13 conclusions are clear and well formulated, correspond to the set tasks and reflect the essence of the dissertation thesis. The work is easy to read; the layout is good and is beautifully illustrated.

Having regard to the above, the doctoral student shows that he has in-depth theoretical knowledge and professional skills related to the problem considered in the dissertation thesis, demonstrating qualities and skills for independent scientific research.

IN CONCLUSION, the dissertation thesis, submitted for review on the topic: "THE ROLE OF LYMPHATIC VASCULAR INVASION IN THE PROGNOSIS OF OESOPHAGEAL CARCINOMA" has significant scientific and practical potential. It fully meets modern-day needs and the author shows an in-depth approach and significant contributions.

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

Sofia  
03.08.2020

Reviewer:.....  
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