Review

By Prof. Dr. Dimitar Zhivkov Stoykov, DSc

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On the dissertation:

POSTCHOLECYSTECTOMY SYNDROME- AN UPDATE OF AN "OLD" PROBLEM. DIAGNOSTIC AND ADVANCED THERAPEUTIC STRATEGY.

for the award of scientific degree **"Doctor of Science"** and scientific specialty **"Surgery"** .

Candidate: Assoc. Prof. Dr. Vasil Markov Bozhkov, MD, PhD.

Brief description of the procedure

On the basis of Rector's Order R-109-452/06.11.23 I am elected as a member of the Scientific Jury for MU-Varna in the procedure for the award of a scientific degree "Doctor of Science" to Assoc. Prof. Dr. Vasil Markov Bozhkov, MD, PhD and with protocol № 1 from 13.11. 2023 of the first session of Scientific Jury I am elected to prepare an official review.

The dissertation papers of Assoc. Prof. Dr. Vasil Markov Bozhkov MD PhD, for the award of Scientific degree "Doctor of Science" are made according the requirements of the The Law on the Development of the Academic Staff in the

Republic of Bulgaria, the regulations for its application and the rules of Medical University - Varna.

Relevance of the dissertation

The dissertation addresses an important recently problem in hepatobiliary surgery, namely postcholecystectomy syndrome. As a reason for this, it can generally attribute to an increase in gallbladder diseases, which includes an increase in complicated forms of GBD such as mechanical jaundice, cholangitis, choledocholithiasis, cholangiogenic liver abscesses, fistulas, papillitis.

Postcholecystectomic syndrome (PCS) was first described by Womack and Crider in 1947. In 1950, Pribram was the first who proposed the name postcholecystectomy syndrome (PCS). It became an increasingly topical problem during the laparoscopic era.

Iatrogenic lesions of the biliary tract can be primarily highlighted as the basis for its increased incidence. Next, one can point to the scattered stones in the abdominal cavity after the violation of the gallbladder wall, either at the cholecystectomy or at the removal of the gallbladder through the trocar hole.

The world literature increasingly recognizes the fact that laparoscopic cholecystectomy performed at a younger age on the one hand, prolonged preoperative period and acalculous cholecystitis on the other hand are accepted as risk factors for the development of PCS.

The dissertator also indirectly implies that the incidence of PCS is lower when cholecystectomy is performed in centers specializing in biliary surgery compared to those in which this surgery is not routinely performed or laparoscopic cholecystectomy is performed at any cost, regardless of future consequences.

Review of the disertation

The dissertation is written in 250 standard pages. The bibliography contains 510 sourses, 17 in cirilic and 493 in latin. The material contains 12 tables, 45 figures and **29** images. The Bulgarian teams that worked on the problem have been studied in detail.

The aim is correctly formulated and the tasks for its achievement - 5 in number, are logically and focused.

The study design is a retrospective and prospective analysis and covers 1532 patients with GBD and its complications for the period 2011 – 2022 operated in Second Department of Abdominal Surgery of UMHAT Saint Marina – Varna. During the study period, 262 patients with PCS. The type of previous surgical intervention was laparoscopic or open. It is evident from the data presented that patients in the two age groups 61-70 and 71-80 years are the two most affected by GBD and its complications, while the disease has a relatively lower incidence in the young under 40 and many elderly patients over 81. The same age dependence was observed in patients with PCS.

All patients underwent preoperative assessment according to the classification of American Society of Anesthesiologists (ASA), patients with serious perioperative risk predominate ASA III and IV- in general 55,3% of patients with PCS.

The dissertation devotes considerable attention to BDI, taking a special place in the literature review, material, and discussion, indicating the dissertator has thoroughly studied this particularly serious pathology of the laparoscopic era.

Instrumental imaging modalities in patients with PCS are described in detail with most of them using 2 or 3 different diagnostic modalities. Abdominal ultrasonography, abdominal CT with contrast, and MRI were standard and routinely used.

The microbiological analysis was done thoroughly. The etiological spectrum of the isolated microorganisms confirms the data from the literature-the

result is fully comparable with the results of other studies. The most common isolates are E. coli and K pneumoniae. The level of resistance of the isolates was also investigated.

An algorithm for the diagnosis and treatment of PCS has been developed, combining the analysis of the world literature and the dissertant's own results, with the aim of achieving a low incidence of postoperative complications and lethality - with the correct choice of timing and type of surgical intervention.

The conclusions are six in number and show that they answer the stated aim and objectives.

The contributions are five and are of an applied, practical and confirmatory nature and reflect the activities of the dissertant and the team of the Clinic in which he works.

The scientific indicator of Assoc. Prof. Dr. Vasil Bozhkov MD PhD fully meet the requirements for the scientific degree Doctor of Science:

A1 -50т.; B2 – 100т.; G5-9 – 101,66т.; D10 – 7т. D10+D12- 105т.

Assoc. Prof. Vasil Bozhkov MD PhD has 10 publications related to the thesis.
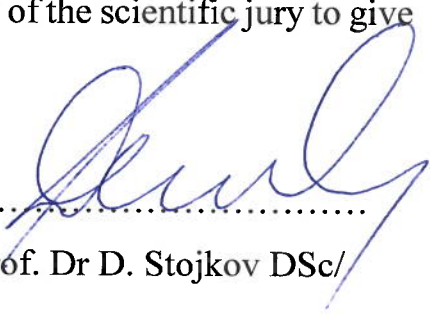
In conclusion, I would state that my submitted dissertation is complete, distinguished by original points and application in surgical practice. The work meets the criteria for the award of the scientific degree Doctor of Science.

I vote POSITIVE and recommend the members of the scientific jury to give their positive vote.

07.12.2023г.   Reviewer: ....

Pleven   /Prof. Dr D. Stojkov DSc/