

RECENSION

On a topic: „ **Acute coronary syndrome in patients with chronic obstructive pulmonary disease**”, presented for public defence before a scientific jury for awarding the scientific and educational degree "PhD", professional direction 7.1. "Medicine" and scientific specialty "Cardiology".

Author of the dissertation work: Dr. Simona Nikolaeva Yankova, PhD student on a part-time in the doctoral program "Cardiology", professional direction 7.1 Medicine, assigned by order P-109-99/ 28.01.2025 at the Medical University - Varna.

Reviewer: Prof. Dr. Zhaneta Georgieva Tianeva PhD, MU Varna, member of the Scientific Jury, approved by order of the Rector of MU Varna.

completed high school in 2010 with intense English language study. In 2016 she successfully graduated from the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna. She obtained a specialty in Cardiology in 2022, and in 2023 and a certificate of professional qualification – Echocardiography – fundamental level. Since 2019 she has been a part-time doctoral student at the First Department of Internal Diseases with the scientific supervisor Assoc. Prof. dr. Atanas Angelov. From February 2017 to June 2021, she was appointed as an honorary assistant in the Department of Internal Diseases of English-speaking students at the Medical University of Varna. Since 2017 she has been working as a cardiologist in the Department of Cardiology at MBAL Dobrich AD, in the city of Dobrich.

Structure of the dissertation work: The dissertation is structured on 174 pages and it is presented with 43 figures and 20 tables and 4 appendices. The bibliography contains 501 cited languages, 18 of which are in Cyrillic, and 469 in Latin. The doctoral student has two publications related to the topic in a specialized journal.

The literature review demonstrates very good knowledge of the literature the ability to obtain detailed information from them. The author emphasizes the RF) and comorbid conditions. The strong relationship between myocardial infarction and COPD was emphasized. The main mechanisms that determine the increased cardiovascular risk in patients with COPD are indicated, with emphasis on chronic inflammation, oxidative stress, reduced physical activity, smoking, dyslipidemia, which results in higher risk and significant morbidity and mortality.

There are not enough studies on COPD as an RF for ACS. It is emphasized that the prevalence and importance of COPD in ACS patients is underestimated. Additionally, although the death rate for patients with ACS has decreased by half, in diagnosis and prompt reperfusion treatment application is noted in the review, which worsens the prognosis and size of the infarct area. Another therapeutic problem discussed in large observational studies is the lack of adherence to the recommendations for secondary prevention after myocardial infarction, in particular beta-blocker therapy, in patients with COPD. In the literature there is

insufficient clarity about the clinical significance and relationship between ACS and COPD, which makes the dissertation work relevant and necessary.

The aim of the dissertation: Study of risk characteristics, clinical expression and treatment in patients with ACS and concomitant COPD, compared to a control group of patients with acute coronary syndrome but no data on COPD. Assessment of adherence to prescribed therapy after dehospitalization, and in particular to beta-blocker therapy, as well as quality of life in subjects with ACS and COPD compared to the control group. Analysis of clinical and demographic characteristics of deceased ACS patients.

The study was conducted over 48 months from 2019 to 2023 in the Dobrich Hospital AD, Dobrich. A total of 140 consecutive patients diagnosed with ACS and hospitalized in the intensive care unit of the Cardiology department at the Dobrich Hospital AD, Dobrich, were studied prospectively. A functional study was performed with a load test according to a validated methodology, tracking changes in physical tolerance of patients with or without COPD. ECG and transthoracic echocardiography were performed. All measurements and analyses were carried out according to the current recommendations of the European Association for Cardiovascular Imaging. Left ventricle function was monitored in all patients. A functional pulmonary assessment was performed on patients who had been diagnosed with COPD.

The statistical analysis of the data was performed using the software product IBM SPSS MAC and Microsoft Excel for Mac was used for the graphical representation. Modern statistical methods were used, allowing to report the interaction of the observed parameters.

The results and their conclusions are convincing and have scientific value and contributory character. The discussion of the results presents a relationship between the results and the data from the literature review. An algorithm for tracking patients with ACS and COPD is presented. Patient education on the specifics of the two diseases: ACS and COPD, symptoms, development and

prognosis of the disease, stimulation of annual flu vaccine. Initiation of cardiac rehabilitation, inclusion in specialized respiratory rehabilitation programs, tele-rehabilitation programs through platforms and mobile applications, dietary regime, mode of administration and effect of drug therapy.

Conclusions are logically inferred from the study results. Patients with ACS and COPD have a pronounced risk profile. The incidence of anemia, chronic kidney disease and stroke was higher in the group with COPD. COPD patients were more likely to present with the clinical picture of ACS without ST-elevation. The studied population with ACS and COPD showed lower adherence to the prescribed major drug classes. Patients who had concomitant COPD were at greater risk of hospitalization for ACS after the acute coronary event. The most common cause was heart failure. Higher BMI, smoking, lower physical activity and higher baseline CRP values were associated with higher mortality in COPD patients one year after ACS.

Scientific contributions of the thesis: For the first time in Bulgaria a study on the risk and clinical characteristics of patients with ACS and COPD was conducted. The pulmonary obstruction spirometric values were monitored. For the first time, the quality of life of patients with ACS and COPD and adherence to prescribed drug therapy was studied. The risk characteristic for coronary artery disease in COPD patients is confirmed. The need for COPD patients to be treated as a high-risk population for ACS is confirmed, taking into account and the poorer quality of life in ACS and COPD patients. The more frequent occurrence of ACS without ST-elevation in COPD patients and their less frequent referral to SCA. The role of ACS as a cause of more frequent hospitalizations in COPD patients has been confirmed. I agree with the conclusions reached and the contribution of the dissertator. I agree with the findings and the acknowledgement of the dissertation's contributions.

In Conclusion: The dissertation work presented by Dr. Nikolaeva is relevant for modern cardiology and pulmonology. It combines her own research and findings with a careful review of the literature. The doctoral student contributes to the clarification of the problems in patients with ACS and COPD. The dissertation work and scientific publications cover the necessary scientometric criteria for awarding the scientific and educational degree "PhD" in the Medical University of Varna. The thesis work has original and confirmatory contributions. I give a positive vote for awarding the scientific degree "PhD" to Dr. Simona Nikolaeva Yankova.

04.03.2025.

Varna

Review

Prof. Dr. Zh. Georgieva, PhD

Заличено на основание чл. 5,
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