DETERMINATION AND ANALYSIS OF ASSOCIATIONS OF MEDICAL AND ANAMNESTIC CHARACTERISTICS OF PATIENTS WITH RISKS OF DEVELOPING CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN ISOLATED ARTERIAL HYPERTENSION

Volik M.S.

Kharkiv National Medical University, Kharkiv, Ukraine

Background. Arterial hypertension (AH), which, according to the WHO, has a mortality rate of up to 30%, is a leading cause of cardiovascular disease, with an incidence of more than 30% in our country, according to official sources. A particular danger is caused by the addition of diseases with bronchopulmonary pathology to cardiovascular pathology, which mutually condition and aggravate each other. One of these diseases is chronic obstructive pulmonary disease (COPD), which affects up to 6.36% of the population of Ukraine and is the most severe bronchopulmonary pathology due to persistent progressive restriction of airflow through the respiratory tract with the formation of pulmonary hypertension and chronic pulmonary heart disease. The most important factor in the development of COPD is tobacco smoking (active and passive) - up to 80% of cases, which is becoming increasingly popular among the population due to modernized electronic smoking devices. Therefore, it is quite relevant to determine the impact of medical and anamnestic factors (primarily smoking) on the development of COPD in isolated AH.

The purpose of the study is to determine the predictive capabilities of medical and anamnestic factors for determining the risk of developing COPD in isolated AH.

Materials and methods. The study was conducted at the Department of Propaedeutics of Internal Medicine, Nursing and Bioethics of KhNMU at the clinical base of the Municipal Clinical Hospital No. 13 of Kherson City Council (in the cardiology and pulmonology departments). The study was conducted to optimize the diagnosis of subclinical myocardial damage in patients with AH and concomitant COPD. The study was conducted in full compliance with existing international and national bioethical standards and rules for conducting clinical trials involving human subjects. All subjects were fully informed about their voluntary participation in the study and the confidentiality of the information received and had comprehensive written information about the main purpose and objectives of the study and its duration and nature with the appropriate personal signing of informed consent.

Determination and analysis of the associations of medical and anamnestic characteristics was performed with the establishment of reliable associations of these indicators with the possibility of developing COPD in AH using univariate and multivariate logistic regression analysis with the calculation of standardized β coefficients (odds ratios (OR) and their 95.0% confidence intervals (CI). Univariate analysis indicated significant associations of each characteristic with the comorbidity of AH and COPD separately, and multivariate analysis - all the defined characteristics simultaneously. Statistical calculations were performed using IBM SPSS 25.0 for Windows.

Results. When determining the associations of medical and anamnestic characteristics of patients with isolated AH with the risk of COPD, only smoking history was a significant predictor (OR=1.148 [95.0% CI 1.077-1.224], $p<0.001$), indicating an increased chance of developing COPD in isolated AH with each year of smoking (1.148-fold increase in odds).

Conclusions. The influence of smoking on the development of COPD in isolated AH was determined, with an increase in such chances with each year of smoking by 1.2 times.