

# Comorbid Metabolic Disorders in Chronic Lung Diseases

**M.I. Gumeniuk**

Yanovsky National Institute of Phthysiology and Pulmonology of NAMS of Ukraine, Kyiv

**Conflict of interest:** none

**BACKGROUND.** Chronic obstructive pulmonary disease (COPD), asthma and interstitial lung diseases (ILD) are often accompanied by various metabolic disorders, aggravating the course and worsening the prognosis of pulmonary pathology. The study of the mechanisms of interaction of systemic inflammatory reactions associated with chronic lung diseases in patients with concomitant metabolic disorders will improve methods for prevention and treatment of complications of this comorbid pathology.

**MATERIALS AND METHODS.** In the PubMed and Google Scholar databases, a literature search has been conducted on the relationship between chronic pulmonary disease and metabolic disorders, as well as the metabolomics of chronic pulmonary disease.

**RESULTS.** Available evidence indicates the role of endocrine system disorders in the pathogenesis of chronic pulmonary pathology. In particular, metabolic concomitant diseases significantly worsen the quality of life of patients and increase mortality. On the other hand, improvement in the metabolic profile in certain categories of patients with chronic lung diseases can positively affect the course of the disease. Preclinical studies indicate the importance of therapeutic recovery of metabolic disorders and the use of circulating metabolites as biomarkers for disease prognosis and treatment response.

**CONCLUSIONS.** Monitoring of metabolic parameters, in particular glucose, lipids, thyroid hormones, calcium and vitamin D, should be a part of everyday clinical practice in all patients with COPD, asthma and ILD. Prescribing specific treatment based on the patient's metabolic profile can slow progression and reduce mortality in chronic lung diseases.

**KEY WORDS:** chronic obstructive pulmonary disease, asthma, interstitial lung diseases, comorbidity, metabolic disorders.

DOI: 10.32902/2663-0338-2019-3-5-15