

The relevance of the topic is underscored by the increasing prevalence of metabolic syndrome (MetS) among young men and its contribution to the early development of left ventricular diastolic dysfunction and pre-heart failure (pre-HF), which are the key predictors of cardiovascular complications and reduced quality of life. This necessitates the development of early diagnostic criteria and timely risk stratification systems.

The aim of this review is to summarize current data on the pathogenesis, clinical presentation, diagnostic criteria, disease course and management of pre-HF in young men with MetS, and to define the role of early identification of diastolic dysfunction of as a marker of subclinical cardiac impairment in this population.

Methods. An analytical review of recent Russian and international scientific publications addressing pre-HF in the context of MetS was conducted, with a focus on its development, clinical course, and diagnosis in young men.

The information search utilized the following databases: Russian Science Citation Index, Best Evidence, PubMed, Clinical Evidence, Cochrane Library.

Results. Pre-HF is an early stage of heart failure, where structural and functional cardiac alterations can be observed without any elicited clinical manifestations. In young men with MetS, pre-HF is developed due to the combination of arterial hypertension (AH), insulin resistance (IR), obesity, and dyslipidemia, leading to the chronic cardiac overload and cardiovascular disease progression.

Identification of pre-HF in this population demands a combined approach, including echocardiography with diastolic function analysis, assessment of natriuretic peptides, inflammatory marker levels, and insulin resistance.

Therapy for pre-HF against the background of MetS is aimed at modifying risk factors, normalizing the metabolic profile, and improving cardiovascular parameters.

Early diagnosis and timely intervention for pre-HF in young men with MetS can significantly reduce the risk of disease progression and the development of cardiovascular complications.

Conclusion. Pre-HF in young men with MetS represents a subclinical stage of cardiovascular impairment, caused by the combined effects of IR, AH, obesity, and dyslipidemia.

Its early identification with the use of echocardiography, biomarkers, and metabolic parameters, as well as the timely correction of risk factors, allows the prevention of the development of clinical heart failure and decreases the long-term cardiovascular risk.