

COVID-19 and comorbid chronic diseases

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ABSTRACT. This literature review includes the latest studies and meta-analyses, dedicated to the problem of comorbidity in coronavirus disease (COVID-19). The most often comorbid conditions that accompany severe and fatal cases of COVID-19 include arterial hypertension (AH), diabetes mellitus (DM), ischemic heart disease (IHD), brain infarction, chronic bronchitis / chronic obstructive lung disease. These diseases share some common features like proinflammatory condition and the deterioration of innate immunity. Mechanisms of unfavorable influence of DM, AH, IHD and chronic obstructive pulmonary disease on the course of COVID-19 include the imbalance of biochemical cascades of angiotensin-converting enzyme 2 and so-called cytokine storm, induced by glucolipid metabolic disturbances. Revealing of causality between chronic diseases and severe course of COVID-19 in future studies can help health system providers to find the susceptible population, to estimate the risk of deterioration of clinical condition and to prescribe the preventive measures (for instance, vaccination of high-risk individuals from influenza and, in the future, from COVID-19). Severe course of COVID-19 and high mortality in multimorbid patients underline the need in the strict control of their basic biological parameters (arterial pressure, fasting plasma glucose etc.). Apart from that, with the aim of minimization of infection risk these patients need to imply stricter quarantine and shielding measures than the relatively healthy people. Medical workers should also emphasize on telemedicine technologies in management of such patients.

KEY WORDS: comorbidity, COVID-19, chronic diseases, arterial hypertension, diabetes mellitus, ischemic heart disease.

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