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INTERNAL DISEASES: THE TIME OF GLOBAL SOMATIC RISK

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This manuscript revises the problem of risk factors in somatic diseases. Singular risk factor and combination of risk factors are important and significantly affect the prognosis, the course, and outcomes of the disease. Today many global indexes have been introduced to assess the impact of risk factors, such as total cardiovascular risk in arterial hypertension, global cardiovascular risk in heart disease and diabetes mellitus, and global somatic risk in somatic diseases. Global somatic risk is based and generalized from total cardiovascular risk in arterial hypertension.

KEY WORDS: clinical medicine, internal diseases, cardiology, risk factors

ВНУТРІШНІ ХВОРОБИ: ЧАС ГЛОБАЛЬНОГО СОМАТИЧНОГО РИЗИКУ

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У статті порушено проблему факторів ризику соматичних захворювань. Розглядаються фактори ризику та сукупний вплив факторів ризику на прогноз, перебіг та наслідки хвороби. Обговорюються тотальний кардіоваскулярний ризик при артеріальній гіпертензії, загальний кардіоваскулярний ризик при хворобах серця і цукровому діабеті, глобальний соматичний ризик при соматичних захворюваннях. Глобальний соматичний ризик при соматичних захворюваннях пропонується будувати на базі загального кардіоваскулярного ризику при артеріальній гіпертензії.

КЛЮЧОВІ СЛОВА: клінічна медицина, внутрішні хвороби, кардіологія, фактори ризику

ВНУТРЕННИЕ БОЛЕЗНИ: ВРЕМЯ ГЛОБАЛЬНОГО СОМАТИЧЕСКОГО РИСКА

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В статье поднята проблема факторов риска соматических заболеваний. Рассматриваются факторы риска и совокупное влияние факторов риска на прогноз, протекание и последствия болезни. Обсуждаются тотальный кардиоваскулярный риск при артериальной гипертензии, общий кардиоваскулярный риск при болезнях сердца и сахарном диабете, глобальный соматический риск при соматических заболеваниях. Глобальный соматический риск при соматических заболеваниях предлагается строить на базе общего кардиоваскулярного риска при артериальной гипертензии.

КЛЮЧЕВЫЕ СЛОВА: клиническая медицина, внутренние болезни, кардиология, факторы риска

Risk factors are a key concept in the clinical practice. World Health Organization (WHO) determines risk factor as any attribute, characteristic or exposure of an individual that increa-

ses the likelihood of developing a disease or injury [1].

Due to a significance of combination of various risk factors on the development of disease,

a term risk factors has been accepted for general use instead of a singular risk factor term [2].

According to the WHO, all risk factors are divided to the internal and external, controlled and non-controlled risk factors [2]. Non-controlled external risk factors include multiple environmental elements, while non-controlled internal risk factors include sex, age (astronomical), and heredity. Controlled risk factors include changes in the blood cholesterol level and composition, high or low arterial blood pressure, active or passive smoking, alcohol abuse, hyper- and hypoglycemia, body weight, disorders in the reactivity and immune system, low and excessive physical activity, psychosocial distress, age (biological), habits and the living conditions (including water and nutrition), etc. [3].

Each risk factor contributes to a probability and complication of the disease. Combination of risk factors significantly exacerbates the risk of development of the disease, its severity, a possibility of early complications, and outcomes [2].

To evaluate the effect of risk factors on the prognosis, the course, and the outcomes of the disease, it is important to introduce a global index (or global score) as an integral measure.

The one successful attempt in this area has concluded in «2007 Guidelines for the Management of Arterial Hypertension», when the total cardiovascular risk (TCVR) was introduced [2]. The idea was effective and TCVR was carried into the new 2013 ESH/ESC Guidelines for the management of arterial hypertension [4].

Six years later, D.M. Eddy suggested expanding the concept of TCVR from the application in the arterial hypertension to a larger scope of heart disease and diabetes mellitus. In April 2013, D. M. Eddy introduced a new integral measure, the Global Cardiovascular Risk score (GCVR) [5]. In the «Pioneering Ideas» blog, the GCVR index was considered as «A New Performance Measure for Prevention» [6].

It is important to mention, that earlier in 2010–2011, in the Russian-speaking scientific

environment, our group has suggested expanding the existing TCVR to the «Global Somatic Risk» (GSR) score [3, 7]. According to the principle of symmetry, the GSR is a generalization of TCVR [8].

The evaluation of TCVR in the guidelines of European Society of Hypertension (ESH) and European Society of Cardiology (ESC) is based on the WHO recommendations. These recommendations identify low, moderate, high, and very high risks in cardio-vascular morbidity and mortality for the next 10 years. GSR classifies the risks of somatic diseases in a similar manner. With a little modification, the TCVR is transformed into GSR, and can be used for the evaluation of a whole variety of somatic conditions.

The inclusion of outcomes of the disease and individualized treatment goals into the Eddy's GCVR is noteworthy, and we believe this is a prospective approach which should be used in many other global scores today and in the future [5].

However, risk factors are not that simple. It is important to consider an absolute level of quantitative measure of the risk factor and its duration, the assessment of single risk factor value in the global index, the philosophy of global index, and all of these are uneasy tasks.

It is not always possible to identify and correctly quantify all the risk factors, outcomes, and other important factors for the systemic composition of global index. The more precisely they are defined, the more accurately GSR is estimated, therefore the better the prognosis and the diagnosis are, the more likely the optimal preventive and therapeutic strategies are used, and the better the results are.

Medicine operates with non-strict sets and it is appreciated that not all of the factors are identified in the global indexes today. Along with a discovery of new risk factors, systematic work with patients and scientific research, the more risk factors will be included in the global indexes. Thus, it is not just a time of GCVR, but the time of GSR has come.

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