

Mekhman Mamedov: case management during and after coronavirus pandemic

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On April 27, 2021, at the initiative of the Indonesian Heart Association, an online meeting was held with one of the leading cardiology experts in Russia, Professor Mamedov M. N.

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Speaker: Mekhman N. Mamedov, Head of the Department of Secondary Prevention of Chronic Non-Communicable Diseases of the National Medical Research Center for Therapy and Preventive Medicine, MD, Professor, member of the Editorial Board of the journals “Kardiologija”, “Cardiovascular Therapy and

Prevention”, Editor-in-Chief of the “International Journal of Heart and Vascular Diseases”, head of the section “Diabetes Mellitus and Cardiovascular Diseases” of the Russian Cardiological Society, Moscow, Russia.

Interviewer (Q): Dr. Megawati Wijaya, Jakarta, Indonesia.

Q: What is the difference in your clinical practice in Russia before and after the pandemic?

It would be correct to say: before the pandemic, during the pandemic and after the pandemic. Russia is a part of the wider world; we have the same tendencies as in the rest of the world.

Until March 2020, the restrictions were small, we heard dramatic facts by World Health Organization. However, in March 2020, quarantine was introduced, and many hospitals, including heart centers, turned into red zones.

Hospitalization of patients with cardiovascular diseases was reduced to 30-40% depending on the region. Outpatients also received limited medical care. At the same time, the number of patients receiving medical advice using telemedicine has increased markedly.

First of all, patients with cardiovascular diseases, oncological diseases and diabetes mellitus were affected.

Now the situation has stabilized and the previous volume of work has been restored. So before and after a pandemic, there isn't much difference in health care delivery. The number of patients increased, since during the pandemic, not all patients could not be examined and receive full-fledged medical care.

Q: Which cardiac surgery has been hit hardest by the pandemic? Percutaneous coronary intervention or coronary artery bypass grafting?

In general, revascularization procedures were not completely canceled during the pandemic/quarantine, but were limited.

During the pandemic, the number of surgical revascularization operations, primarily coronary artery bypass grafting, has sharply decreased. Since such operations require preparation and planned hospitalization, which were sharply reduced or completely canceled. Percutaneous interventions, especially emergency ones, continued to be carried out. On the contrary, there was a slight increase in the number of percutaneous interventions performed on the arteries of the upper and lower extremities and the brain, due to the increased number of thrombosis and thromboembolism due to COVID-19.

Q: Are there any heart failure problems due to COVID-19? How an increase in the number of heart attacks or blood clots in the coronary arteries in patients with COVID-19 in Russia?

In recent months, there has been an increase in the number of patients with decompensated heart failure, especially among convalescents of the elderly and senile age. The reason for this may be the consequences of pneumonia, pulmonary fibrosis, microthrombosis of the pulmonary arteries. In view of the high incidence of acute coronary syndrome among the population that has persisted for many years, it is difficult to assess the

contribution of COVID-19 to the growth of such cases. I also believe that there will be more patients with rhythm disturbances after suffering from viral myocarditis.

Q: What is the situation with heart patients before and after vaccination with Sputnik V, does their number decrease after vaccination?

Due to the fact that vaccination started relatively recently, at this stage we can only talk about the good tolerance of the vaccine, including by persons with chronic diseases of the cardiovascular system. The effect of vaccination on the course and prognosis of CVD is generally poorly understood. But there is a register of patients with CVD after vaccination.

The effectiveness of "Sputnik V" according to the results of the third phase of research has been confirmed at a level above 90%. Against the British strain the effectiveness is good, but against the South African strain the effectiveness is less, as well as other vaccines. The frequency of side effects against the background of companion vaccination is not more than 0,2%. Malaise was observed in about one in 20 people. However, nothing serious was noted — a slightly fever and slight malaise.

Cardiovascular disease is a risk factor for the more severe course of coronavirus infection. Patients with cardiovascular disease may take longer to recover from the coronavirus. Vaccination is a solid guarantee to avoid getting sick or worse.

For patients with cardiovascular diseases, there are no contraindications to vaccinations, except for acute conditions, in particular, cerebrovascular accident or myocardial infarction. The acute period for contraindication of vaccination usually lasts about four weeks, and during the rehabilitation period, it is possible to vaccinate against the coronavirus.

All patients with heart illnesses and after interventions, should be consulted before vaccination should consult with the attending physician. If we are talking about cardiac surgery, then in each case there should be a consultation with a doctor, because some surgical interventions suggest the possibility of immune reactions.

Patients with CVD are given a clinical examination and health assessment before vaccination, followed by a two-stage vaccination.

Q: The future of cardiology in the post-pandemic world. What is the biggest difference we will see in patients with heart disease as well as in patients of internal medicine clinics, will the use of telemedicine be in the spotlight?

Of course, in the era of a pandemic and after its end, the role and prevalence of telemedicine will increase significantly, primarily in the field of internal diseases. I think that after the pandemic, the number of patients with *cor pulmonale* and pulmonary hypertension

will noticeably increase due to the large number of cases of thromboembolism of small branches of the pulmonary artery and long-term fibrosis of the lung tissue in convalescents.

Obviously, it is necessary to create international recommendations for the introduction of patients with chronic diseases in the era of a pandemic, as well as rehabilitation after coronavirus infection.

Russia is one of the largest countries in the world that has developed several vaccines against COVID-19. A large-scale work has been carried out in the country to combat the pandemic, and according to the World Health Organization, the mortality rate and other complications associated with COVID-19 are lower than the average figures around the world.

In 2021, a number of large-scale projects were carried out in Russia to study the consequences of COVID-19, including in patients with cardiovascular diseases. The author of one of the projects is Professor Mekhman N. Mamedov.

A single-stage multicenter study was followed up to assess the dynamics of behavioral risk factors and psychosomatic status in patients with chronic non-communicable diseases (CNCD) during quarantine/self-isolation. The study involved 351 patients from 10 cities of 5 countries of the world (Russia, Azerbaijan, Kazakhstan, Lithuania, Kyrgyzstan). The inclusion criteria were men and women aged 30-69 years with the presence of one or more CNCD, who were in quarantine self-isolation during the COVID-19 period. Arterial hypertension, ischemic heart disease with or without a myocardial infarction, cancer with the use of chemo and/or radiation therapy, type 2 diabetes mellitus and chronic obstructive pulmonary disease/

bronchial asthma were included among the CNCD. All patients were conducted a standard survey using a questionnaire prepared by the National Medical Research Center for Therapy and Preventive Medicine of the Ministry of Health of Russia, which included taking into account socio-demographic indicators, behavioral risk factors, somatic diseases, psychosomatic status, as well as measuring blood pressure, pulse rate, body weight and calculating body mass index. According to the results obtained, during self-isolation in patients with CNCD, there is a slight deterioration in the clinical condition, requiring an increase in the dose of medications taken. In the conditions of quarantine, a decrease in physical activity and a violation of food habits were registered. Every second patient with CNCD was found to have moderate chronic stress and unexpressed depression/anxiety.

Professor Mekhman N. Mamedov is one of the authors of a unique manual for doctors “**An interdisciplinary approach in the management of people with chronic non-communicable diseases during the coronavirus pandemic**”. The book presents the principles of management of patients with cardiovascular diseases, diabetes mellitus, chronic obstructive pulmonary diseases, oncological diseases and comorbid pathology.