Resolution of
Eurasian Teleconference «COVID-19 – important issues»

January 21, 2021
Kyiv, Ukraine

Almost 16 000 health care specialists have registered to participate in the Eurasian Teleconference «COVID-19 – important issues».

International format of the Teleconference was ensured by involvement of foreign speakers, organizers and participants. There were doctors from Ukraine, Uzbekistan, Tadzhikistan, Kazakhstan, Moldova, Georgia and Azerbaijan as registered participants.

The key scientists and doctors who have been providing assistance to the patients with COVID-19 from the very first days of pandemic have shared their own experience. Interdisciplinary format of the Teleconference was ensured by speakers from different special fields: infectious disease specialists, pulmonary specialists, anesthesiologists, critical care physicians, cardiologists and neurologists.

12 main speeches were offered to the participants and they were dealing with the following issues:

- What does rational approach to infusion therapy in case of COVID-19 mean and what amount of infusion solutions is safe for such patients?
- What do we know about SARS-CoV-2-associated endothelitis? What are the consequences of lung tissue damage, peculiar features of pulmonitis in case of COVID-19?
- How can we influence on cytokine storm and its long-term effects?
- Possible consequences of coronaviral infection neuroinvasion.
- Tactical approach to management of patients with severe and moderate progression of COVID-19, based on personal experience of practitioners.
- Long-term respiratory, cardiovascular, nervous and psychological effects of earlier COVID-19 – prevention and possible pharmacological correction.

Conclusions and decisions based on discussion of reports:

- The current protocols approved by the Ministry of Health should be used for treatment of patients with COVID-19. As far as disease area is new and insufficiently studied it would make sense to add promising medicines and methodologies with proved clinical effectiveness to treatment patterns. In particular, use of edaravonum as part of combination treatment may have good prospects.

- Understanding of wavelike development of COVID-19 demonstrates rationale for use of syndromic and pathogenetic approach to treatment of COVID-19 at each stage of disease development. At the stage of mild disease, one should consider use of inhalation antiseptic (decametoxinum), local antiviral drugs (aminocaproic acid), system-based antiviral drugs. In case of moderate progression of disease, it would make sense to add three drugs of «Breakwater» scheme (edaravonum, particular combination of L-arginine and L-carnitine, hyperosmolar crystalloid solution observing the scheme of low-volume infusion therapy) to the background therapy.

- The patients with severe progression of coronaviral disease demonstrate combined disorder of haemodynamics, microcirculation, and hemostasis, as consequences of advanced microthrombovasculitis. Hypovolemia disorder may be an important reason for progression of disease. Its existence increases the number of cases of pulmonary embolism, acute renal insufficiency and mortality. Individualized approach to fluid therapy, use of vasoactive agents may improve the results of infusion therapy.

- In case of massive admission of patients to hospital it is important to have clear protocols for treatment of serious and very serious patients. For this purpose, it is necessary to carry out careful analysis of demographic and clinical features, to stratify potential for survival and to study reasons of fatal cases. It is important to develop the algorithm for anticoagulant therapy, antibiotic therapy, respiratory support and infusion therapy. Restrictive regime of infusion therapy does not mean that it shouldn't be used at all. We have to look to progression dynamics, fluid status, renal function and to choose correct volume and composition of infusion.

- Hypovolemia disorder is an important reason for progression of disease. So, it is recommended to use the strategy of normovolemic infusion therapy to avoid complications. Such therapy will provide for normalization of mucociliar clearance functioning, deintoxication and prevention of hemoconcentration.

- SARS-CoV-2 virus has affinity to cells of the central nervous system and may cause development of neurological symptoms in infected patients.

- It might be reasonable to add edaravonum to the intensive therapy scheme, as far as it is able to decrease the effects of not only oxidative stress, but also of "cytokine storm" represented as considerable decrease of B-cell stimulatory factor 2. In such a way it not only removes neurological symptoms expression but also decreases the level of constitutional inflammatory response.

- Lung damage is a diagnostic criterion and a reason for complicated progression of COVID-19. Pathogenetic processes are based on damage of respiratory endothelium, excessive discharge of anti-inflammatory mediators, synthesis of free radicals. The use of parenteral acetylcysteine in the patients with community-acquired pneumonia was associated with decrease of proinflammatory mediators; in the patients with ARDS – with shorter period of hospital stay and use of ALV. The results of clinical studies of pneumoprotective, mycolitic and anti-oxidant action of parenteral acetylcysteine let us claim on potential efficiency of this drug in treatment of patients with COVID-19.

- Coronaviral infection can cause an Iceland disease and further myalgic encephalomyelitis; it is a pathological state which is characterized by chronic fatigue lasting at least 6 months and causing cognitive defects. Use of solutions with intensive energetic effects, based on xylitol, plays an important role in the complex of balanced, pathogenetically substantiated infusion therapy of asthenic syndrome.

- High concentration of cytokines circulating in blood serum after COVID-19 and forming systemic underlying inflammation and causing manifestation of postinfectious pathology are an important pathological element for development of post-COVID complications. In that respect antioxidants are the most important medicines, as far as reactive oxygen intermediate (ROI) plays the most important role in inflammatory reaction and systemic underlying inflammation.

- The cytokine storm influences the targeted organs any way. SARS-CoV2 binds to receptors of angiotension-converting enzyme type 2 (ACE-2), located in vessels and heart. Damages are caused by additional dysregulation of RAAS/ACE-2 system as a result of introduction of coronaviral infection and causes damage to cardiovascular system.

- The combined medicines containing L-arginine and L-carnitine should be used first of all for treatment of patients with post-COVID complications. L-arginine has antihypoxic, membrane-stabilizing, cytoprotective, anti-oxidant, antiradical, disintoxication action, it improves microcirculation, contributes to vasodilatation, prevents activation and adhesion of lymphoid cells and blood plates. L-carnitine participates in energy metabolism, and in metabolism of ketone bodies, it is a source of energy, it has cardioprotective action.

професор, академік НАМН України, Президент Асоціації фтизіатрів і пульмонологів України, директор ДУ «Національний інститут фтизіатрії і пульмонології імені Ф.Г. Яновського НАМН України

Фещенко Ю. І.

Д.м.н., професор кафедри анестезіології та інтенсивної терапії НМУ ім. О. О. Богомольця, Президент Асоціації анестезіологів України

Дубров С. О.

Д.м.н., професор, Ректор Ташкентського інституту удосконалення лікарів

Акілов Х. А.