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Briefing on the WHO Interim guidance on the clinical management of COVID-19

Identifying the origin of emerging viral disease has proven complex in past epidemics in different countries. A well planned series of scientific researches will advance the understanding of animal reservoirs and the route of transmission to humans. The process is an evolving endeavour which may lead to further international scientific research and collaboration globally.

The COVID-19 pandemic has affected older people disproportionately, especially those living in long-term care facilities. In many countries, evidence shows that more than 40% of COVID-19 related deaths have been linked to this issue, with figures being as high as 80% in some high-income countries. Concerted action is needed to mitigate the impact across all aspects of long-term care, including home- and community-based care, given that most users and providers of care are those who are vulnerable to severe COVID-19.

Regarding the therapeutic management, FDA issued an emergency use authorisation (EUA) for remdesivir for the prevention or treatment of COVID-19, taking into account the preliminary data upon the reduced hospitalization time for patients with severe symptoms.

Existing published literature on the agents listed above is mostly observational in nature, with few clinical trials; and does not provide high-quality evidence in favour of any of these agents. (*Clinical Management of COVID-19, Interim guidance, 27 may 2020, WHO*).

- 70 clinical trials in different stages including immunomodulatory antibodies are ongoing: ravulizumab, eculizumab, MEDI3506, itolizumab, infliximab, siltuximab, otilimab, lenzilumab, mavrilimumab, octagam, bevacizumab, tocilizumab, LY-COV555.

- 25 clinical trials in different stages including antiviral drugs as monotherapy or combinations are ongoing: lopinavir, oseltamivir, galdesivir, levovir, favilavir/favipravir, darunavir.
- Also, it is to underline a pilot study involving the transplantation of mesenchymal stem cells (MSCs), with emerging role in combating inflammatory processes, angiogenesis, in transplants and tissue repair, having regenerative potential. Into seven patients with COVID-19 resulted in significant cure or improvement in lung function and symptoms without adverse effects. MSCs can partially accumulate in the lungs and can improve the lung microenvironment.
- The Antisens therapies involve genetically modified RNA molecules that block the formation of viral proteins in the human cell; practically blocking the construction of new viral particles.
- Not all potential therapies involving the COVID-19 treatment are drugs. Some are devices that somehow treat this disease. These potential treatments include blood purification devices that filter the patients' blood in order to remove excess protein (for example, cytokines that cause the "cytokine storm") or toxins that cause respiratory or organic failure in patients.

A successful vaccine would be able to protect the population from COVID-19. Researchers use a variety of platforms, from well-established ways to induce immunity in a vaccinated person (e.g., attenuated live virus vaccines), to innovations (e.g., DNA-based vaccines), to build effective anti-COVID-19 vaccines.

At 1st July 2020, WHO announces a global "megatrial" launch called SOLIDARITY for effective anti-COVID-19 treatment with the enrolment of approximately 5,500 patients from 21 countries, targeting the response to many questions: Do these regimens reduce mortality? Do they reduce hospitalization time? Does it affect the need for COVID-19 patients with pneumonia to be ventilated? Can it minimize the risk of infecting healthcare professionals or people at risk? From this Solidarity trial, on 4 July 2020, regarding the lopinavir/ritonavir combination, WHO announces the discontinuation of the study, mainly because it did not reduce mortality and, from the same reason, the trial involving hydroxychloroquine or chloroquine was discontinued in June 2020.