Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Preface

COVID-19 in the Geriatric Patient

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Editor

After 2 years of the COVID-19 pandemic and after 1 year of vaccination campaign (with great social and economic inequality), the SARS-CoV-2 infection continues to spread quickly in many countries around the world, with the consequent respiratory illness, and still generates a very high number of affected patients and a significantly high mortality rate.[1] In this situation, the attention of researchers is mostly directed to the impact of age and multimorbidity on the prognosis of the frail and older patients. However, it became clearly evident that age and comorbidity per se are correlated with adverse outcomes but cannot systematically predict them if not associated with other conditions.

This issue addresses all the main important problems of COVID-19 in older people, from the acute phase to the chronic phase (long COVID-19), from the biological mechanisms to clinical manifestations, and also provides indications for the best care and treatment with a specific multidisciplinary approach.

During these 2 years of the COVID-19 pandemic, clinicians and pathologists have spent efforts to better characterize the site(s), nature, and severity of damage caused by SARS-CoV-2. Although the lung is definitely the first target organ of SARS-CoV-2 infection, accumulating evidence suggests that the virus can spread in many different organs, including heart, blood vessels, kidneys, gut, muscle, and brain.[2] For this reason, it is clear enough that a multidisciplinary approach becomes crucial for the evaluation and the follow-up of patients, especially older subjects, with COVID-19 disease (**Fig. 1**).

The geriatrician is the specialist who best can manage the multidimensional health problems of older subjects, with a great aptitude and skill to cope with multimorbidity and complex patients.[2] In particular, the geriatrician will be able to manage the onset of the most important geriatric syndromes, such as bed rest, sarcopenia, malnutrition, urinary incontinence, and delirium. For example, in COVID-19, nutritional status is an important factor across all disease stages from the acute to the chronic phase,[3]

Clin Geriatr Med 38 (2022) xv–xvii
https://doi.org/10.1016/j.cger.2022.05.001
0749-0690/22/

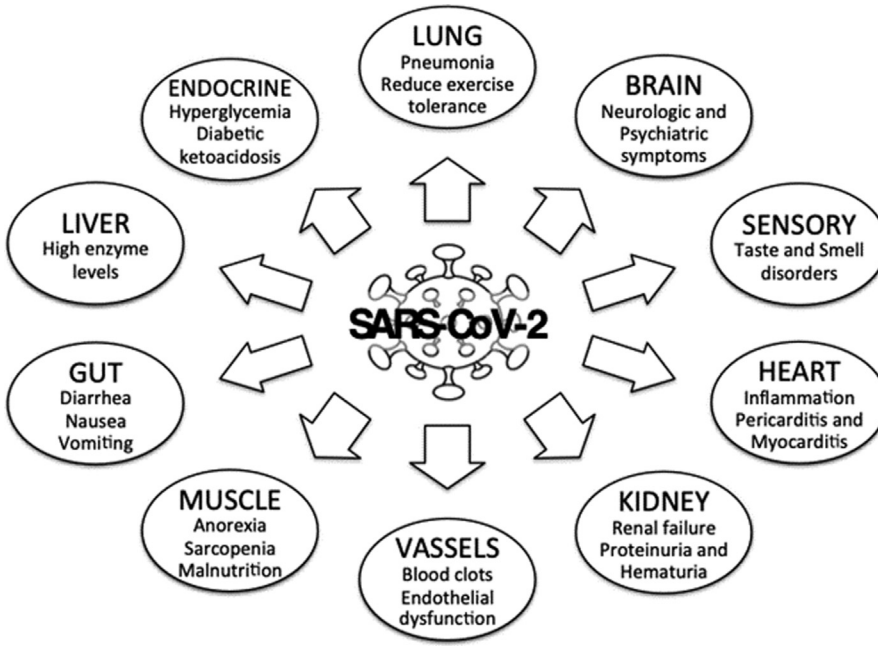

Fig. 1. Pulmonary and extrapulmonary manifestations of SARS-CoV-2 infection.

particularly in a subject at higher risk for negative outcomes, such as older frail adults and those with multimorbidities. It is widely acknowledged that malnutrition is both a cause and a consequence of immune dysfunction. In addition, in older patients with COVID-19, low levels of circulating markers of nutritional status (eg, albumin, prealbumin, lymphocyte counts) are associated with worse outcomes.[4] Prolonged in-hospital stay, especially in the intensive care unit, is a well-established risk factor for malnutrition, and leads to significant decline in muscle mass and strength and overall physical performance. It is clearly described that following SARS-CoV-2 infection, intense inflammation may aggravate catabolic processes. These phenomena may worsen malnutrition and at the same time are correlated with longest recovery, impaired physical performance, and reduced quality of life after hospital stay.[5]

Finally, the complexity of patient follow-up, the different medical specialties involved, and the possibility that some patients may develop long-term symptoms call for a multidomain organization to adequately match the needs of COVID-19 survivors. The rapid spread of the SARS-CoV-2 infection pandemic has led to an extraordinary amount of observational and experimental data focusing mainly on the acute phase of the disease. On the contrary, evidence of COVID-19 clinical history following the acute phase is quite limited, and the evidence about the long-term outcomes is not conclusive. As a consequence, it is of extreme importance that health care services organize services to ensure a comprehensive follow-up of frail older subjects suffering from the SARS-CoV-2 infection. Patient follow-up will offer an important opportunity to accumulate data in a standardized way to better define the global impact of a new disease, namely COVID-19, to better identify the specific clinical needs, and to develop comprehensive and individualized care plans for these frail patients. From this perspective, the scientific evidence reported in the articles that make up this issue

is of great importance for clinicians but also for those in charge of the health care organization.

Finally, I would like to share with the readers the Gemelli Against COVID-19 Post-Acute Care (GAC19-PAC) project, the initiative developed by the Department of Geriatrics, Neuroscience and Orthopedics of the Catholic University of the Sacred Heart (Rome, Italy) aiming to respond to the needs of COVID-19 survival. With this project, the Fondazione Policlinico Universitario A. Gemelli IRCSS has set up a multidisciplinary health care service called "Day Hospital Post-COVID-19" for all the patients recovering from the SARS-CoV-2 infection.[6]

ACKNOWLEDGMENTS

The study was supported by Ministero della Salute - Ricerca Corrente 2022.

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