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COVID-19 Post-Acute Care Team

COVID-19 pandemic forced countries to adopt strategies aimed at respond-
ing to the health emergency by containing contagion. Lockdowns have
ensured the achievement of this goal but imposed substantial restrictions
to the freedom of movement and resulted in social isolation for a large share
of vulnerable people. The aim of the present study was to evaluate the impact
of COVID-19 pandemic and associated emergency restriction measures on
the quality of life, lifestyle habits, and psychosocial status in older adults.

How can Biology of Aging Explain the Severity of COVID-19 in Older Adults 461
Antonella Gallo, Erika Pero, Simona Pellegrino, Noemi Macerola, Celeste Ambra
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Montalto

Aging has been identified as one of the most relevant risk factors for poor
outcomes in COVID-19 infection. Since now, different mechanisms
responsible for worse outcomes in the elderly have been proposed, which
include the remodeling of immune system, the higher prevalence of malnu-
trition and sarcopenia, the increased burden of multimorbidity, and, to a
lesser extent, the direct effects of age on the respiratory system and hor-
monal profile. It seems that the interplay between all these causes, rather
than the individual pathophysiological mechanism, explains the increased
severity of the disease with age.

Inflammaging at the Time of COVID-19 473
Maria Beatrice Zazzara, Andrea Bellieni, Riccardo Calvani, Hélio Jose
Coelho-Junior, Anna Picca, and Emanuele Marzetti

Severe coronavirus disease 2019 (COVID-19) is associated with overpro-
duction of proinflammatory cytokines. The ensuing cytokine storm contrib-
utes to the development of severe pneumonia and, possibly, to long-term
symptom persistence (long COVID). The chronic state of low-grade inflam-
mation that accompanies aging (inflammaging) might predispose older
adults to severe COVID-19. Inflammaging may also contribute to symptom
persistence following acute COVID-19. Antiinflammatory drugs and immu-
nomodulatory agents can achieve significant therapeutic gain during acute
COVID-19. Lifestyle interventions (eg, physical activity, diet) may be
proposed as strategies to counteract inflammation and mitigate long-term symptom persistence.

Clinical Features of SARS-CoV-2 Infection in Older Adults
Francesca Remelli, Stefano Volpato, and Caterina Trevisan

Covid-19 clinical presentation is extremely heterogeneous, especially in older patients due to the possible presence of atypical symptoms, such as delirium, hyporexia and falls. The clinical characteristics at onset are influenced by the presence of common health-related conditions in older people, such as comorbidity, disability and frailty, and not simply by chronological age. Few studies investigated the tendency of Covid-19 symptoms to aggregate in cluster and the use of cluster approach might better describe the clinical complexity of the acute disease. Concerning the prognostic significance of Covid-19 clinical presentation in older people, the available literature still provides discordant results.

Coronavirus Disease-2019 in Older People with Cognitive Impairment
Yves Rolland, Marion Baziard, Adelaïde De Mauleon, Estelle Dubus, Pascal Saidlitz, and Maria Eugenia Soto

Patients with cognitive impairment have paid a heavy price for the coronavirus disease 2019 pandemic. Their clinical characteristics and their place of life made them particularly exposed to being infected and suffering from severe forms. The repercussions of the isolation measures also had significant repercussions on the expression of their neuropsychiatric symptoms and the burden on families and health care professionals.

The Impact of the COVID-19 Pandemic on Physical Activity, Function, and Quality of Life
Catherine M. Said, Frances Batchelor, and Gustavo Duque

It is now more than 2 years since the beginning of the COVID-19 pandemic, which has affected people around the globe, particularly older persons, who are at the highest risk of severe disease. In addition, many of those who survive will have symptoms that persist after the initial infection. COVID-19 infection severely affects function and mobility through its impact on the musculoskeletal system. This article focuses on the impact of the COVID-19 pandemic on physical activity in older people and subsequent effects and implications for function and quality of life.

Long COVID-19: The Need for an Interdisciplinary Approach
Isabel Rodriguez-Sanchez, Leocadio Rodriguez-Mañas, and Olga Laosa

Long coronavirus disease 2019 (COVID-19) is characterized by persistent COVID-19 symptoms that last for at least 2 months. In the elderly population, apart from the typical symptoms (fatigue, cough, or dyspnea), unspecific symptoms coexist (functional deterioration, cognitive impairment, or delirium) that can mitigate the prevalence of this syndrome in this age group. Its main consequence is the functional decline, leading to
sarcopenia, frailty, and disability, in addition to the nutritional and cognitive disorders. Thus, a multicomponent and individualized program (exercise, diet, cognitive stimulation) should be designed for older people with persistent COVID, where new technologies could be useful.

The Impact of Long COVID-19 on Muscle Health

Montserrat Montes-Ibarra, Camila L.P. Oliveira, Camila E. Orsso, Francesco Landi, Emanuele Marzetti, and Carla M. Prado

COVID-19 negatively impacts several organs and systems weeks or months after initial diagnosis. Skeletal muscle can be affected, leading to fatigue, lower mobility, weakness, and poor physical performance. Older adults are at increased risk of developing musculoskeletal symptoms during long COVID. Systemic inflammation, physical inactivity, and poor nutritional status are some of the mechanisms leading to muscle dysfunction in individuals with long COVID. Current evidence suggests that long COVID negatively impacts body composition, muscle function, and quality of life. Muscle mass and function assessments can contribute toward the identification, diagnosis, and management of poor muscle health resulting from long COVID.

Malnutrition and Sarcopenia in COVID-19 Survivors

Stefan Grund and Jürgen M. Bauer

Malnutrition has been one of the most common complications of older COVID-19 survivors. COVID-19 associated symptoms like loss of appetite as well as changes in taste and smell may trigger the deterioration of nutritional status, while other complications of the disease may contribute to it, like respiratory failure that necessitates admission to the ICU. Especially in nursing home residents reduced food intake may be related to preexisting and also to incident geriatric syndromes like delirium. Sarcopenia has also been highly prevalent in older COVID-19 survivors. It is caused and exacerbated by COVID-19-associated inflammatory processes, total or partial immobilization, and malnutrition. COVID-19 survivors may be at high risk of developing the vicious circle that results from the interaction of deteriorating nutritional status and declining functionality. Regular monitoring of nutritional and functional status is, therefore, indicated in all older COVID-19 survivors. If malnutrition and/or functional decline have been identified in this patient population, low-threshold provision of individualized nutritional and exercise interventions should be installed. In those that are most seriously affected by malnutrition and sarcopenia ambulatory or inpatient rehabilitation has to be considered. Geriatric rehabilitation programs should be specifically adapted to the needs of older patients with COVID-19.

Nutraceuticals and Dietary Supplements for Older Adults with Long COVID

Matteo Tosato, Francesca Ciciarello, Maria Beatrice Zazzara, Cristina Pais, Giulia Savera, Anna Picca, Vincenzo Galluzzo, Hélio José Coelho-Júnior, Riccardo Calvani, Emanuele Marzetti, and Francesco Landi on behalf of Gemelli Against COVID-19 Post-Acute Care Team

The persistence of COVID-19 symptoms weeks or months after an initial SARS-CoV-2 infection has become one of the most burdensome legacies
of the pandemic. This condition, known as long COVID syndrome, affects many persons of all age groups and is associated with substantial reductions of quality of life. Several mechanisms may be involved in long COVID syndrome, including chronic inflammation, metabolic perturbations, endothelial dysfunction, and gut dysbiosis. These pathogenic mechanisms overlap with those of the aging process and may aggravate pre-existing degenerative conditions. This review discusses bioactive foods, supplements, and nutraceuticals as possible interventions against long COVID syndrome.

Neuropsychological Measures of Long COVID-19 Fog in Older Subjects

Alessandra Lauria, Angelo Carfi, Francesca Benvenuto, Giulia Bramato, Francesca Ciciarello, Sara Rocchi, Elisabetta Rota, Andrea Salerno, Leonardo Stella, Marcello Tritto, Antonella Di Paola, Cristina Pais, Matteo Tosato, Delfina Janiri, Gabriele Sani, Francesco Cosimo Pagano, Massimo Fantoni, Roberto Bernabei, Francesco Landi, and Alessandra Bizzarro on behalf of Gemelli Against COVID-19 Post-Acute Care Team

Coronavirus disease 2019 is known to impact older people more severely and to cause persistent symptoms during the recovery phase, including cognitive and neurologic ones. We investigated the cognitive and neurologic features of 100 elderly patients with confirmed diagnosis of coronavirus disease 2019 evaluated in the postacute phase through a direct neuropsychological evaluation consisting on Mini Mental State Examination and 8 neuropsychological tests. Overall, a total of 33 participants were found to perform at a level considered to be pathologic; more specifically, 33%, 23%, and 20% failed on Trial Making, Digit Span Backwards, and Frontal Evaluation Battery tests, respectively.

COVID-19 Vaccines in Older Adults: Challenges in Vaccine Development and Policy Making

Chih-Kuang Liang, Wei-Ju Lee, Li-Ning Peng, Lin-Chieh Meng, Fei-Yuan Hsiao, and Liang-Kung Chen

The coronavirus disease 2019 (COVID-19) pandemic has had strong adverse impacts on vulnerable populations, such as frail older adults. The success of COVID-19 vaccine development, together with extensive global public health efforts, has brought hope to the control of the COVID-19 pandemic. Nevertheless, challenges in COVID-19 vaccine development and vaccination strategies among older people remain. This article reviews vaccinations in older adults, compares COVID-19 vaccine platforms, the efficacy and safety of COVID-19 vaccines in frail older people in long-term care settings, and the challenges of COVID-19 vaccine development and policy making for vaccination strategies in older adults.