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Opinion Article

Multiple Sclerosis with Comorbid Other Autoimmune Diseases or Cancer: Need for Enhanced Alertness during Covid-19 Pandemic

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Opinion

Multiple Sclerosis (MS) is a chronic, immune-mediated, neuroinflammatory and neurodegenerative disease [1] affecting mainly young adults and having a great impact on patients' Quality of Life (QoL) [2] and their caregivers' everyday life [3].

It is well known that MS patients often present other autoimmune diseases in anticipation or after MS initiation, with an escalating percentage in regards to the type of the autoimmune disease, with thyroiditis Hashimoto and psoriasis being the most frequent, in many ethnic groups, the Hellenic included [4]. Likewise, there are research articles supporting the notion that cancer is a frequent comorbidity in MS patients, while others result to contradictory findings [5].

On the other hand there are rare cases of patients having several comordid autoimmune and malignant diseases, like one of ours, which had been published some years ago, in an effort to shed light in the hidden link of autoimmunity and cancer, with genetics, immunogenetics, epigenetics and viruses being the epicenter of the research direction [6].

Corona Virus Disease 2019 (COVID-19) pandemic appeared as a global threat at the very beginning of this year, with the huge number of almost ten (10) million incidents globally, up-to-date [7]. Initially, the new disease was thought to attack mainly lungs but gradually it was becoming clear that SARS-CoV-2 attacks many functional systems of the human body [8], among them central and peripheral nervous system and muscles, as well [9]. Early and more recent research on the issue clarified at a high level the pathophysiological and immunological aspects of COVID-19 [10–11].

Many COVID-19 symptoms remind of certain MS and paraneoplastic symptoms fact that could be a serious confounder in the total clinical status of patients with MS and malignant comorbidities. On the other hand it is really hard to realize what it could happen should such a patient be infected with SARS-CoV-2 during a relapse concerning MS or a period under chemotherapy or radiotherapy, or even during intervals under Disease Modifying Treatments (DMTs) or immunosuppressants. Although data are limited, it seems that MS DMTs do not obviously increase the risk of acquiring symptomatic SARS-CoV-2 infection [12]. Patients with various cancer types have been particularly affected, since they are regarded a highly vulnerable group in the current pandemic, due to their immunocompromised status caused by both cancer and various anticancer treatments [13].

In the light of these thoughts a more frequent clinical reevaluation of MS patients with autoimmune or/and cancer comorbidities seem as a first step of a comprehensive strategy towards an avoidance of further complication of their already complex clinical status. Although, we have to keep in mind that frequent visits to the hospitals with expert physicians is not an acceptable routine for such patients with the fear of infections generally, which is an ongoing ethical dilemma. Thus, frequent telemedicine and well-educated groups for medicine-at-home seem a solution during COVID-19 outbreak. At this point it is worth mentioning that a rapid, reliable and affordable test for COVID-19 infection would be of crucial importance. In this outpatient setting, the total final costs would be less, if one considers the much higher hospitalization costs, especially for MS or cancer complications, or COVID-19 infection, with unpredictable outcome for such patients.

Children with MS consist a rare subgroup of the total MS group with a percentage up to 3–5%, but with special needs and ongoing understanding of the pathophysiology of their disease and response to various DMTs [14]. Adolescents or younger children are prone to SARS-CoV-2 exhibition since social distance and precautionary measures are difficult to be kept. Continuous education and targeted reminders are needed for these children. If another autoimmune disease or/and cancer comorbid with MS or other demyelinating disease of the Central Nervous System (CNS), the situation becomes very complicated since the individuals of these age groups are under vaccination programs as well.

Overall, the comorbidity of MS or the other demyelinating disease of the CNS with autoimmune diseases or cancer indicates the need for enhanced alertness and special measures for these patients, with immune dysregulation, towards minimization of further complications of their already complex clinical status.

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