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HOW TO MANAGE RHEUMATIC PATIENTS DURING THE CORONAVIRUS PANDEMIC

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The current outbreak of severe acute Respiratory Syndrome - Coronavirus - 2 (SARS-CoV-2) is causing one of the worst epidemics in the last 20 years [1]. Without proper containment measures, there is the risk for hospitals to get overwhelmed by cases of coronavirus disease-2019 (COVID-19). Not only would this scenario limit the chances to treat the infected patients, but it would also cut down proper and timely treatments for those affected by other diseases, such as cardiovascular diseases, tumours as well as autoimmune disorders.

Given this phenomenon, we are learning how important it is to adopt early isolation precautions along with a firm control of the infection, the identification of infected patients and the establishment of new special units with a trained medical staff and proper equipment [2].

However, it is equally important not to lose sight of patients with chronic diseases, since they require a regular and accurate monitoring in order to avoid a worsening of their status, which would lead to becoming an additional medical emergency. This is, for example, the case of patients affected by rheumatic diseases (RDs) and especially of those taking immunomodulatory drugs.

RDs (eg rheumatoid arthritis, RA; systemic lupus erythematosus, SLE; etc.) and the use of immunosuppressive agents have been associated with an increased risk of infection [3]; nevertheless, it should be remembered that a high disease activity is also amongst the causes of an increased infectious risk. It has been estimated that an increase of clinimetric indices, namely DAS28 (Disease Activity Score on 28 joints) in RA and SLEDAI (SLE Disease Activity Index) in SLE, correlates with a growth in the rate of infections of approximately 20% and 70%, respectively [4, 5]. While there is a generic increase in the risk of infection, as of today there is no clear evidence that patients with RDs are at increased risk from SARS-CoV-2 when compared to patients with different comorbidities [6].

The increasing knowledge of the pathophysiology of SARS-CoV-2 infection [1,2] has led to consider some antirheumatic drugs as valid treatment options for the management of COVID-19. In this particular scenario, Favalli et al. [7] have recently analysed the evidence concerning the positive and negative effects of drugs commonly used to treat RA, including biological drugs such as tocilizumab (anti-interleukin [IL]6), anakinra (anti-IL1) and Janus Kinase inhibitors (JAK-I, such as baricitinib); these therapies appear to have a rationale in cases of SARS-CoV-2 and especially in one of its worst complications: cytokine release syndrome (CRS).

However, we would like to focus on a drug which has proven to be of particular interest, namely chloroquine (CQC) and its derivative, hydroxychloroquine (HCQ). These are widely used antimalarial drugs with well-known immunomodulatory properties that have extended their use to various rheumatological diseases (RA and SLE).

The ability of CQC to produce an antiviral effect is given by its intracellular activity which interferes with viral growth and diffusion; such element has been known for quite some time and has recently been confirmed [8] along with its ability to reduce the aforementioned cytokine storm [9]. Recent results have verified the effectiveness of CQC and HCQ in improving lung involvement in patients with COVID-19 [10]. HCQ also appears to have a more powerful action than CQC [11] and in a recent preliminary study, it seems to play a very important role in prevention [12]. It is our opinion that the pharmacological action of HCQ, its low cost and its favourable safety profile could guarantee this molecule a leading role in the strategy against COVID-19.

Consequently, within this scenario, rheumatologists [13] should provide support for a correct evaluation of both effectiveness and risk–benefit ratio of the various anti-rheumatic drugs in the treatment of COVID-19; rheumatologists should also help in the assessment and care of the many patients with higher infectious and exacerbation risks.

In general, the interruption of antirheumatic therapies should not be recommended as it could lead to a worsening of the pathology thus increasing the need for the use of other immunosuppressants or high doses of glucocorticoids (factors that could increase the infectious risks).

It is important that patients continue to take their therapies during these weeks of the COVID-19 epidemic. Furthermore, considering the hypothetical role of the HCQ in COVID-19, its administration should not be interrupted in patients with RDs, even if a protective effect on the infection has not been documented yet. Keeping patients under therapy and the current rules of social distancing have created the need to monitor the progression of RDs and the tolerance of therapies remotely.

A great help to better manage some of these problems is given by Telemedicine (TM). TM can be used for the management of chronic RDs such as arthritis, connective tissue diseases and vasculitis, especially in a period in which social distancing is encouraged.
TM can serve as a safe and effective alternative to standard care in those patients that could acquire an increased susceptibility to COVID-19. Recent studies have shown similar results amongst groups of patients followed with standard care protocols versus TM for several pathological conditions [14, 15].
It is quite evident that this is not an easy path to introduce since there are still some obstacles given, on the one hand, by the patients (they could have difficulties in adapting to something new in times of emergency or they could have neither adequate IT skills nor access to a computer) and, on the other hand, by the national health system itself (uncertain regulatory framework, undefined legal aspects).
However, it is exactly in these difficult moment that an opportunity can be created to revolutionize chronic patient care through a network of services by intensifying the relationship between consultants, general practitioners and patients using already available technologies.
As soon as the current pandemic ends, TM could continue to be used to provide more care for patients. We could aspire to obtain an actual "Tele-Treat-to-Target" which could allow to improve the patients' outcome as well as to optimize their therapies and their diagnostic processes; it could also lead to a shortening of the waiting lists with a plausible yet tangible save of both direct and indirect costs.

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