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timing does matter!*

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Steroid administration in the Covid-19 era; timing does matter!

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Sir,

Oral steroid administration represents a common practice in various ENT pathologies, i.e. idiopathic sudden sensorineural hearing loss (SSNHL), or acute post-viral anosmia. Indeed, steroid administration is associated with a high chance of hearing recovery in the former case [1], whilst an improvement in olfactory recognition indicates that steroids may be effective for acute, reversible stages of olfactory mucosal injury in the latter condition [2].

The novel coronavirus SARS-CoV-2 is a positive-sense RNA virus, acknowledged of infecting humans over the last year. The clinical features of confirmed cases include lower respiratory tract illness with fever, dry cough, and dyspnoea [3]. The acute respiratory distress syndrome (ARDS) observed in a significant proportion of fragile patients, roughly after the second week, is apparently attributed not only to an uncontrolled viral replication but also to an out-of-control host response [4].

Exogenous glucocorticoids have traditionally been associated with immune suppression. Hence, their use during the Covid-19 pandemic has generally been discouraged, as they may exert a detrimental effect on the innate immunity, thus limiting the first line of defense, and increasing the plasma viral load. Nevertheless, adaptive immunity should also be taken into account, with regard to Covid-19 immunopathology, as the respective ARDS onset coincides with the appearance of a specific antibody against SARS-CoV-2 [5]. Steroid therapy, in this case, has been associated with lower mortality rates and increased 28-day survival [6, 7].

The timing of steroid treatment in the Covid-19 era seems, therefore, to be of paramount importance, improving

the chances of a positive outcome in critically ill patients, but also posing as a potential threat for patients, who have not yet surpassed the higher obstacles. Indeed, ENT surgeons should not overlook that the recent successful steroid administration in a SARS-CoV-2 patient with SSNHL reported by Koumpa et al. [8] involved a patient, who had already been discharged from ICU, whilst the successful steroid treatment of a post- SARS-CoV-2 anosmic patient reported by Touisserkani and Ayatollahi [9] was attempted when the PCR result was negative.

Hence, caution is warranted, when ENT surgeons are facing emergencies involving SSNHL or chemosensory deficits, and the pros and cons of steroid administration should be carefully weighed, taking not only the possibility of a SARS-CoV-2 infection into account but also the stage upon which the infection appears to lie. A multidisciplinary team working with infectious-disease specialist input represents the main mechanism of the optimal clinical decision-making in SARS-CoV-2 infection-perplexed ENT emergencies, in an effort to successfully guide patients throughout their disease trajectory.

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