

COVID-19 related persistent olfactory disorders represent an unprecedented challenge

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Dear Editor,

We have read with interest the recent article by McWilliams et al. [1] which reported data on the recovery of olfactory function 2 years after severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection. Prior to this, only one other study was published with such long follow-up detecting a 2-year prevalence of OD at 11.7 % but in a population that did not include only patients who had OD during infection [2]. Such a long follow-up is essential to obtain reliable results, as the recovery of post-viral olfactory dysfunctions (OD) can occur spontaneously even more than a year after infection [3,4]. The results collected by McWilliams et al. are emblematic of the seriousness of the problem we are facing: more than 60 % of patients who had an OD during the infection do not fully recover their sense of smell at two years. The authors used a methodology based on patient interview. These types of studies allow for a large amount of data to be collected quickly, at low cost, and individuals can act as self-control by comparing their current olfactory function to that before infection. However, compared to psychophysical studies, they significantly underestimate the prevalence of residual OD as patients often confuse significant recovery with complete recovery. It is therefore likely that the prevalence of persistent OD is even higher [5,6]. Such a high prevalence means that in the next few years we will have a very high number of requests for assistance for this disabling morbidity [7]. The sense of smell is a fundamental determinant of the quality of life and its reduction can expose individuals to a large number of environmental risks that we normally identify with the sense of smell [8,9]. OD has often been overlooked in the past, there are no shared therapeutic guidelines and health systems are therefore not ready to face this challenge. Studies such as that of McWilliams et al. may provide us with a solid epidemiological basis from which to draw clinical and therapeutic indications.

About this, analyzing the results reported in the study, it is interesting to note that the percentage of individuals who self-reported a

complete recovery did not change significantly over time (38.7 % at 3 months, 38.9 % at one year, 38.2 % at two years). This means that although there is room for improvement, after 3 months, the risk of having long-term OD is very high. Patients should therefore be initiated to specific therapies early and, after 3 months [10–12], experimental therapies may be considered, such as the injection of platelet-rich plasma into the olfactory cleft [13].

Another important finding is that recovery, at least partial, can occur spontaneously even at a great distance from the OD onset. This must push us to reassure patients and, in any case, start specific therapies whatever the time of observation. In particular, olfactory training has proved to be an effective and side-effect-free instrument for improving olfactory scores even in individuals with long-lasting OD [14,15].

Finally, the study by McWilliams et al. provides an indication that older individuals are at greater risk of incurring persistent OD. This is probably linked to a lower ability, in these subjects, to respond to damage to the olfactory epithelium [16]. The identification of risk factors for the development of persistent OD, which has so far yielded poor results [17–19], is essential for identifying populations of patients at risk, to be subjected to early treatment protocols.

CRediT authorship contribution statement

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Founding sources

None declared.

Declaration of competing interest

The authors declare that they have no conflict of interests.

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