

Letter to the Editor about the Beltrán-Corbellini *et al.* publication: 'Acute-onset smell and taste disorders in the context of Covid-19: a pilot multicenter PCR-based case-control study' (*Eur J Neurol* 2020. doi: 10.1111/ene.14273)

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Dear Editor,

We read, with interest, the paper entitled 'Acute-onset smell and taste disorders in the context of Covid-19: a pilot multicenter PCR-based case-control study' [1]. The authors observed that sudden loss of smell (LOS) was significantly more frequent in patients with Covid-19 (39%)

than those infected with influenza (12%). These data corroborated the results of Yan *et al.* [2] who reported that LOS affected 71% and 17% of positive and negative Covid-19 patients with influenza-like symptoms, respectively. The assessment of LOS was made through a patient questionnaire.

Their article raises several points. Firstly, the authors reported a prevalence of 5–48% for LOS in the current literature. However, recent European and American large case series reported that the LOS incidence would be higher than presumed by Beltrán-Corbellini *et al.*, reporting rates of 66% and 70% in mild cases of Covid-19 infection [13].

Second, the authors rejected the use of objective olfactory evaluations due to concerns about contamination and unnecessary burdens on both physician and patient. However, emerging evidence suggests that there may be a mismatch between the rate of self-reported LOS of patients and the prevalence of anosmia and hyposmia according to psychophysical olfactory testing [4,5]. Thus, in a cohort of 46 patients reporting LOS, objective olfactory testing found 52% and 24% of anosmic and hyposmic individuals, respectively, i.e. 24% of patients with LOS did not have olfactory dysfunctions [4]. In contrast, in a recent clinical series, Moein *et al.* [5] showed that 98% of patients with Covid-19 presented an objective LOS, whereas only 38% self-reported LOS. These studies highlight the importance of including objective testing in planning future studies. To reduce the risk of contamination or exposure for physicians, a system of mobile testing units with limited olfactory stick tests may help [4].

Third, many patients infected with influenza were contacted by telephone 2 months after discharge, which raises the possibility of underestimation of LOS in this group of patients due to recall bias.

Interestingly, the authors reported that only 13% of patients had nasal obstruction [1] whereas we observed up to 68% nasal obstruction in our series of 1420 patients with a mild form of Covid-19

infection [3]. Despite the high frequency of nasal obstruction, there was no statistically significant correlation between anosmia and nasal obstruction, indirectly supporting the occurrence of damage to the olfactory neuroepithelium.

Finally, we fully share the conclusion of the authors suggesting the imperative to add LOS to the list of symptoms of Covid-19 infection. We have previously stressed the need to consider initial and sudden LOS as a specific symptom of Covid-19. France, Switzerland and the USA already adopted this point, but the World Health Organization has not yet updated their criteria. Use of self-reported LOS and loss of taste as a marker of infection will be a very useful weapon in the Covid-19 fight, especially in countries with emerging pandemics where access to testing will be greatly limited.

Disclosure of conflicts of interest

The authors declare no financial or other conflicts of interest.

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