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LETTER TO THE EDITOR

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Coronavirus disease 2019: New things to know!

To the Editor,

We have read with interest the review of Feng et al[1] "coronavirus disease 2019 (COVID-19): What we know?" which report the clinical features, diagnosis and treatment of the novel coronavirus disease 2019 (COVID-19).

In this review, the median age in the different studies ranging from 49 to 59 years, and more than half of patients were men. Nearly half of cases had one or more comorbidities, such as hypertension, diabetes, and cardiovascular disease. The main symptoms included fever, fatigue, dry cough, myalgia, and dyspnea. The uncommon symptoms included sputum production, headache, hemoptysis, and diarrhea. No otorhinolaryngological symptoms were described.

We conducted a study with COVID-19 patients resulting in similar findings; we emphasize that the most common symptoms are similar, but with a few other symptoms which are not reported by Feng et al. We conducted a retrospective study in the *Nord Franche-Comté* Hospital since a major French cluster of COVID-19 began on 1 March 2020 in Mulhouse city (less than 30 miles from our hospital). Between 1 March and 13 March 2020, we report the data about 62 patients infected with COVID-19. For each patient the diagnosis was confirmed by real-time reverse transcriptase polymerase chain reaction on respiratory samples.[2]

Out of the 62 patients, 29 (47%) were hospitalized, the median age was 56 years [39-71], and 24 patients (39%) were men. Thirty-two (52%) had comorbidities, including cardiovascular disease (22[35%]), chronic obstructive pulmonary disease (11 [18%]), diabetes (10 [16%]), and immunosuppression (2 [3%]). Main symptoms (>50% of cases) were fever (>38°C) for 47 [76%] patients, fatigue (58[94%]), cough (50[81%]), headache (48 [78%]), myalgia (38 [61%]), and anosmia (32 [52%]). Other symptoms (>30% of cases) were dysgeusia (30 [48%]), rhinorrhea (30 [48%]), diarrhea (24 [39%]), and dyspnea (22 [34%]). Nineteen patients (31%) had crackling sounds on pulmonary auscultation. In our study, one of our patients had acute encephalitis as initial presentation.

In comparison to the review of Feng et al the main symptoms are similar: fever, fatigue, cough, and myalgia. However, headache (three quarters of patients) and diarrhea (more than a third of patients) was more often notice in our study. Our main point is that anosmia and dysgeusia were present in half of the patients. To our knowledge, these otorhinolaryngological symptoms have never been described in COVID-19 beforehand. The influenza like illness (ILI) is nonspecific; however, anosmia and dysgeusia are not described associated with influenza.[3,4] Patient with ILI associated with anosmia and/or dysgeusia should lead clinicians to suspect a COVID-19. We wonder if there was invasion of the olfactory receptors or damage of the first cranial nerves in the nasal cavity cell membrane and/or central lesion; as described in after viral olfactory loss with other viruses.[5,6] As noticed above, 78% of our patients had headache and one patient had a presentation with acute encephalitis. The neuroinvasive mechanism of COVID-19 is poorly described. There are some arguments indicating that an alteration of the dopamine synthetic pathways is possibly involved in the pathophysiology of COVID-19.[7] In all cases, there are increasing evidence that coronaviruses are not always confined to the respiratory tract and also invade the central nervous system inducing neurological diseases.[8,9]

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CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

AUTHOR CONTRIBUTIONS

SZ, TK, and NJKO collected the epidemiological and clinical data and processed statistical data. SZ and TK drafted the manuscript. LT, PYR, and VG revised the final manuscript.

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