

# Sore throat in COVID-19: Comment on "Clinical characteristics of hospitalized patients with SARS-CoV-2 infection: A single arm meta-analysis"

#### To the Editor,

We read with interest the recent meta-analysis by Sun et al<sup>1</sup> that included 50 466 patients with coronavirus disease 2019 (COVID-19). The author found that fever and cough were the most common symptoms, and several subjects had muscle soreness or fatigue. In addition, they reported that "by reading the included literature, we found that diarrhea, hemoptysis, headache, sore throat, shock, and other symptoms are rare."<sup>1</sup>

Regarding sore throat, we believed that this could be a confounding affirmation. The majority of included patients (48 981 subjects) in the review<sup>1</sup> was extracted from studies that did not describe accurately the clinical presentation.<sup>2.4</sup> The largest report on 44 672 confirmed COVID-19 patients focused on critical cases and on the case-fatality rate, without a detailed presentation of the symptoms.<sup>2</sup> Yang et al<sup>3</sup> showed limited data and we were able to download only a two pages manuscript. Sun et al<sup>4</sup> described only age and sex on included patients. On the contrary, other studies that described the full symptoms spectrum of COVID-19 found that pharyngodynia was not rare. The sore throat was reported to be present in 5% to 17.4% of COVID-19 patients.<sup>5-7</sup> Guan et al<sup>6</sup> in a large series of 1099 COVID-19 patients found pharyngodynia in 13.9% of cases.

At this stage of the COVID-19 pandemic, it is fundamental to inform correctly health care providers. Real-time reverse transcriptase-polymerase chain reaction (RT-PCR) assays were the standard for the detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from respiratory secretions collected by nasal and oropharyngeal swabs.<sup>8</sup> A high false-negative rate (FNR) has been reported for these tests. Results from quantitative RT-PCR could be affected by the variation of viral RNA sequences or by the viral load in different anatomic sites during the disease natural history.<sup>8</sup> By estimate, FNR from one-time testing was high as 30% to 50% in real COVID-19 cases.<sup>8</sup> A recent report on 1014 COVID-19 cases found that only 59% of patients had positive SARS-CoV-2 swabs at presentation, while chest computed tomography had higher sensitivity for the diagnosis of COVID-19.9 Consequently, the clinical presentation could be helpful in identifying suspected COVID-19 cases and we think that sore throat should not be considered a rare symptom as reported by Sun et al.<sup>1</sup> This could lead to undiagnosed cases and to the spread of infection. Patients with the suspected disease should be isolated (use of individual rooms was recommended, with negative pressure if possible), and

health personnel should use waterproof gowns, gloves, goggles, and surgical masks or FFP2 masks.<sup>10</sup> Further studies are needed to clarify the importance of pharyngodynia in COVID-19.

## CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

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## REFERENCES

- Sun P, Qie S, Liu Z, Ren J, Li K, Xi J. Clinical characteristics of hospitalized patients with SARS-CoV-2 infection: a single arm meta-analysis [published online ahead of print February 28, 2020]. J Med Virol. https://doi.org/10.1002/jmv.25735
- 2. The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team, Chinese Center for Disease Control and Prevention. The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China. *Zhonghua Liu Xing Bing Xue Za Zhi.* 2020;41:145-151.
- 3. Yang Y, Lu Q, Liu M, et al. Epidemiological and clinical features of the 2019 novel coronavirus outbreak in China. *medRxiv*. 2020. https://doi. org/10.1101/2020.02.10.20021675
- 4. Sun K, Chen J, Viboud C. Early epidemiological analysis of the SARS-CoV-2 outbreak based on a crowdsourced data. *medRxiv*. 2020. https://doi.org/10.1101/2020.01.31.20019935
- 5. Chen N, Zhou M, Dong X, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet.* 2020;395:507-513.

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- Guan W, Ni Z, Hu Y, et al. Clinical characteristics of coronavirus disease 2019 in China [published online ahead of print February 28, 2020]. N Engl J Med. https://doi.org/10.1056/NEJMoa200 2032
- Wang D, Hu B, Hu C, et al. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. JAMA. 2020;323:1061-1069.
- 8. Ai T, Yang Z, Hou H, et al. Correlation of chest CT and RT-PCR testing in coronavirus disease 2019 (COVID-19) in China: a report

of 1014 cases [published online ahead of print February 26, 2020]. Radiology. https://doi.org/10.1148/radiol.2020200642

- Wang Y, Kang H, Liu X, Tong Z. Combination of RT-qPCR testing and clinical features for diagnosis of COVID-19 facilitates management of SARS-CoV-2 outbreak [published online ahead of print February 25, 2020]. J Med Virol. https://doi.org/10.1002/jmv.25721
- European Centre for Disease Prevention and Control (ECDC). Novel coronavirus. https://www.ecdc.europa.eu/en/novel-coronavirus-china. Accessed 1 March 2020.