

## Extrapulmonary Manifestations COVID-19

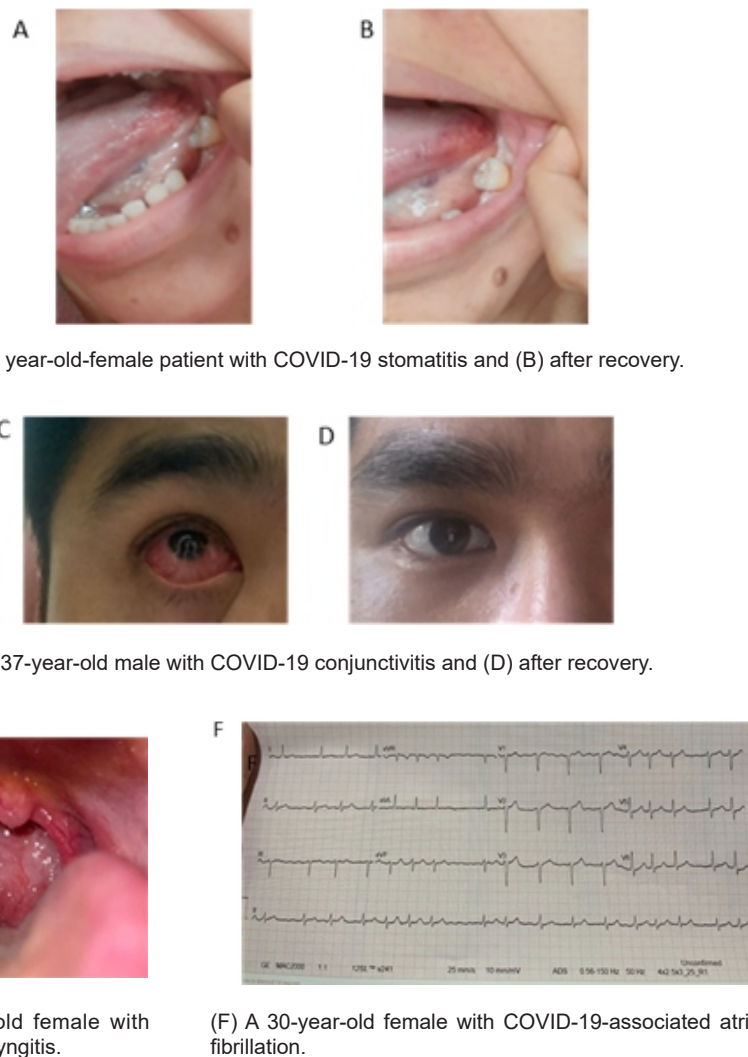
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**Figure 1.**

After being declared as a pandemic on March 11, 2020 by the World Health Organization, COVID-19 has affected 497 million people worldwide as of 9 April 2022.<sup>1</sup> COVID-19 is a disease with a plethora of clinical manifestations, which extends to those beyond pulmonary signs and symptoms. Studies that report on the clinical presentation of COVID-19 rarely report specifically on cases with only extrapulmonary manifestations of COVID-19.<sup>2,3</sup> Extrapulmonary clinical presentations of COVID-19 without pulmonary signs and symptoms is rare, and in such cases, COVID-19 is rarely suspected.<sup>4</sup>

We herewith describe four patients with extrapulmonary manifestations of COVID-19, with positive SARS-COV-2 PCR when the test was performed for initial patient screening. The first patient is a 44-year-old female who developed painful ulcer (**Figure 1A**) with burning sensation at the lateral side of the tongue along with low grade fever. This symptom appeared after the initial complaints of coughing and nasal congestion subsided. She received steroid-containing mouthwash and aloclair topical. She had no complaint after 14 days. However, the tongue lesion had not recovered completely (**Figure 1B**). The second patient is a 37-year-old male, who complained of red eyes (**Figure 1C**) with itchiness and increased tear production for 3 days before seeing an ophthalmologist. He received anti-inflammatory topical eyedrop 6 times daily. He developed coughing and burning sensation of the throat. On day 10, due to the persistence of symptoms, PCR SARS-COV-2 was performed and came back positive. The eye redness eventually subsided after 12 days of symptom onset (**Figure 1D**). The third patient is a 44-year-old female who developed burning sensation and soreness on her throat (**Figure 1E**) upon swallowing with fever and chills. These symptoms appear consecutively without any respiratory complaint. She received symptomatic medications, and symptoms last for a total of 7 days. Her complaints were resolved after 14 days. The fourth patient is a previously healthy, 30-year-old female, with a normal weight and BMI, and without any comorbidity,

cardiovascular risk and neither personal nor family history of cardiovascular disease. Due to complaints of fever, she underwent SARS-COV-2 PCR which came back positive. On day 7, she complained of sudden lightheadedness, exertional dyspnea, anxiety and palpitations and went to the emergency department. ECG was performed, showing non-rapid ventricular response atrial fibrillation (**Figure 1F**). Upon further examinations, N-terminal prohormone of brain natriuretic peptide (NT-proBNP), CRP, Troponin I, and echocardiography were found to be normal. She was admitted for observation, and was started oral bisoprolol. ECG was evaluated the following morning and normal sinus rhythm was found. In these 4 patients, COVID-19 stomatitis, conjunctivitis, pharyngitis and COVID-19-associated atrial fibrillation was subsequently diagnosed, respectively.

In the pandemic stage of COVID-19, COVID-19 screening has often been routinely performed due to the high risk of transmission.<sup>5</sup> However, the decrease in the number of COVID-19 cases may prompt physicians to perform SARS-COV-2 testing based on clinical suspicion. It is imperative to consider the likelihood of COVID-19 and perform SARS-COV-2 PCR in patients with extrapulmonary complaints that have persisting complaints despite treatment.

## REFERENCES

1. Ritchie H, Mathieu E, Rodés-Guirao L, et al. Coronavirus pandemic (COVID-19). 2020.
2. Elrobaa IH, New KJ. COVID-19: Pulmonary and extra pulmonary manifestations. *Frontiers in Public Health*. 2021;9.
3. Gupta A, Madhavan MV, Sehgal K, et al. Extrapulmonary manifestations of COVID-19. *Nature Medicine*. 2020;26(7):1017-32.
4. Abobaker A, Raba AA, Alzwi A. Extrapulmonary and atypical clinical presentations of COVID-19. *J Medical Virology*. 2020;92(11):2458-64.
5. Chin ET, Huynh BQ, Chapman LAC, Murrill M, Basu S, Lo NC. Frequency of routine testing for coronavirus disease 2019 (COVID-19) in high-risk healthcare environments to reduce outbreaks. *Clinical Infectious Diseases*. 2021;73(9):e3127-e9.