

## Delayed laryngeal edema after administration of the SARS-CoV-2 bivalent messenger RNA vaccine

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Dear Editor,

Anaphylaxis is a rare adverse reaction to the messenger RNA (mRNA) COVID-19 vaccines, and the most common event is delayed cutaneous reaction.<sup>1-3</sup> It must be outlined that the benefits of receiving the COVID-19 vaccines outweigh the risk of any extremely rare adverse reaction for most individuals.

There is only one report of 3 distinct cases of delayed angioedema, with suggestive laryngeal edema, occurring after the administration of the original monovalent mRNA COVID-19 vaccine (Pfizer BioNTech). All patients denied a previous history of angioedema and had no potential triggers before the onset of symptoms. All 3 patients had an atopic history of rhinitis, and 2 had asthma. Two individuals had acute urticaria as well. Two patients developed delayed angioedema after the first vaccine dosage. All required epinephrine, corticosteroid, and antihistamine administration. The mean time to symptom development was 39 hours. Serum tryptase and C4 levels were normal in 2 patients, and not collected in 1. All of them were treated in the emergency department (ED), and their angioedema completely resolved within 24 hours.<sup>4</sup>

A 68-year-old White woman, with a history of chronic rhinitis and asthma, tolerated well 4 COVID-19 vaccines (2 CoronaVac and 2 Pfizer-BioNTech), without adverse symptoms. One year later, she received a Pfizer-BioNTech bivalent booster, and 24 hours later she developed laryngeal edema (throat tightening with intense difficulty breathing), without facial or tongue angioedema, wheezing,

or urticaria. There were no previous similar episodes and no triggers before symptom onset. She was promptly evaluated in the ED. Intramuscular epinephrine was not administered because the patient's acute respiratory distress spontaneously and steadily improved, and the laryngeal stridor finally disappeared. She was started on intravenous corticosteroid and antihistamine and maintained overnight in the hospital for close observation. Serum tryptase was not measured. On the next day, she was discharged asymptomatic using her regular asthma and rhinitis medication. No further episodes of laryngeal edema were reported in the subsequent month.

To our knowledge we are presenting the first case of delayed laryngeal edema after bivalent mRNA COVID-19 vaccination, with prompt and complete recovery.<sup>5</sup>

### References

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