Editorial

COVID-19-Vaccination-induced-airway-immune responses in patients with chronic obstructive pulmonary disease and healthy individuals

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To our knowledge, the impact of SARS-CoV-2 (COVID-19) infection among persons with chronic obstructive pulmonary disease (COPD) and other vulnerable persons remains unclear.[1] A recent study among 27 COVID-19 vaccinated individuals (11 COPD subjects (either GOLD grade 2 (n=9) or grade 3 (n=2) with 10 being ex-smokers (All subjects were aged >40years) and 16 healthy control subjects (All subjects were aged >40years), 43 pre-COVID-19-vaccination subjects (All were aged > 40years), and 9 healthy control subjects (All subjects were aged >40years) with a history of SARS-CoV-2 (COVID-19) infection, at >2 weeks of COVID-19 vaccinated subjects' specimen donation (collection) after completing two doses of either Comirnaty (Pfizer; 6 COPD patients and 7 healthy control subjects) or Vaxzervria (Oxford-AstraZeneca; 5 COPD patients and 9 healthy control subjects) revealed that anti-spike IgG antibody, but not IgA levels were higher in airways (sputum or nasal specimen collection) post-COVID-19 vaccination.[2] Similar responses of anti-spike IgG antibody in patients with COPD and healthy control subjects were also demonstrated.[2] Comirnaty vaccine is known to produce higher systemic anti-spike immunoglobulins, in comparison to Vaxzervria vaccine.[3]

Conclusion

Early nasal anti-IgA antibody responses are COVID-19 vaccine dependent, whereas COVID-19-vaccine-induced mucosal anti-IgG antibody responses persist for longer than anti-IgA antibody responses.

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Conflicts of interest

None.

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