The emergence of coronavirus disease 2019 (COVID-19) has created unprecedented challenges in respiratory care, necessitating the exploration of novel therapeutic interventions. Because the disease suddenly emerged and spread at a very rapid pace, numerous attempts were made to find the most appropriate respiratory support treatment [1]. Noninvasive respiratory support with reservoir mask oxygenation is usually considered the first-line choice for acute hypoxemic respiratory failure with COVID-19 pneumonia. A high-flow nasal cannula (HFNC) provides humidified and heated oxygen with increased tidal volume and end expiratory volume. In contrast, HFNC offers decreased dead space, respiratory rate, and work of breathing [2].

In this issue of Acute and Critical Care, Gur et al. [3] reported that dual oxygenation of reservoir mask and HFNC lowered 30-day mortality in patients with COVID-19 pneumonia. The value of this study is that addition of a reservoir mask to HFNC has been shown as one potential treatment option for COVID-19 pneumonia patients with hypoxemia. Although this study was retrospective and not randomized, it demonstrated its worth through success despite a propensity of variables such as gender, background diagnoses, laboratory findings, vital signs, and total administrated dose of glucocorticoids.

However, there was no significant difference in secondary outcomes and use of dual respiratory support modalities. Additionally, there are concerns that HFNC may increase the risk of cross-infection among healthcare providers and patients via aerosol and contamination of the HFNC circuit [4]. While the benefits of combined HFNC and reservoir mask oxygenation are compelling, high-level evidence supporting dual oxygenation remains limited [1]. Combined treatment of dual oxygenation presents a nuanced strategy in the management of COVID-19 pneumonia-related hypoxemic respiratory failure. Robust clinical trials are essential to establish its safety and efficacy in diverse patient populations.

Nevertheless, the combination of reservoir mask oxygenation and HFNC allows flexibility in adapting to the dynamic clinical course of COVID-19 pneumonia [5]. This enhanced oxygenation has the potential to alleviate hypoxemic respiratory failure more effectively than either therapy alone. The ability to adjust oxygen delivery based on individual patient needs may enhance treatment efficacy [6]. The potential advantages in terms of oxygenation and patient comfort, including resource implications, require further empirical validation [7]. During the pandemic, medical staff around the world experienced difficulties due to COVID-19, and an even more serious crisis may occur in the future. Consensus guidelines for application...
of equivalence methodologies when treating COVID-19 with different phenotypes are under debate [8]. Continued research is essential to elucidate the true benefits and risks of this dual modality and to guide clinicians to optimize respiratory support for affected patients, even if only to guard against evolved forms of infection.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

FUNDING

None.

ACKNOWLEDGMENTS

None.

ORCID

Dowan Kim https://orcid.org/0000-0003-2262-2882

REFERENCES