



Choosing the Proper Interface for Noninvasive ventilation in COVID-19 Patients

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Introduction: Early series suggested high mortality for patients with COVID-19-associated acute respiratory failure (ARF) who received invasive mechanical ventilatory support, raising the concern that these patients may be particularly vulnerable to ventilator-induced lung injury. NIV is a major treatment modality alternatives to Invasive Ventilation in the COVID-19 patients. Despite advances in NIV technology and the experience of medical staffs, the failure rate of NIV in the acute setting remains high, ranging between 18% and 40%. therapy success depends on the choice of the proper mask.

This review discusses the different types of masks that can be used in patients with ARF due to COVID-19.

Materials and Methods: In this review study, data gathering was done by searching electronic resources including Google search engine and scientific databases.

Keywords: NIV, COVID-19, interface.

Results: The choice and application of the interface is a considerable challenge for any treatment team. There are 6 types of interfaces (Nasal, Oro-Nasal, Nasal Pillow, Oral, Total Face Mask, Helmet) that can be used during NIV therapy in the acute setting. Choosing the appropriate interface involves consideration of patient preferences and tolerance, and determining the correct size and fit is essential to successful ventilation. Another challenge is NIV may cause aerosolization.

Conclusions: Based on the available evidence, oro-nasal and face masks are preferred in patients with ARF in the acute setting. Experience with fitting and prevention of interface-related problems such as air leaks, skin irritation, and pressure ulcers are essential for successful NIV therapy. The helmet is a promising alternative to masks during NIV in patients with COVID-19, particularly in patients who cannot tolerate masks and can prevent aerosolization.

Refernce:

Patel BK, Kress JP, Hall JB. Alternatives to Invasive Ventilation in the COVID-19 Pandemic. *JAMA*. 2020;324(1):43-44. doi:10.1001/jama.2020.9611
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