GUIDANCE SUPPORTING AEROGEN/CLOSED CIRCUIT

GOLD Science Committee Report¹

“Nebulisers may be needed in critically ill patients with COVID-19 receiving ventilatory support. In this case, it is vital to keep the circuit intact and prevent the transmission of the virus. Using a mesh nebuliser in ventilated patients allows adding medication without requiring the circuit to be broken for aerosol drug delivery.”

Spanish Expert Clinical Consensus²

“If aerosol therapy is used, vibrating mesh nebulisers with adaptation to the elbow of the interface is the option of choice. As a second option we can use a vibrating mesh nebuliser with a T-piece fitted to the NIMV* circuit. Since this is a ‘closed system’, there is no dispersion into the environment provided leakage at the mask periphery is well controlled.”

*non-invasive mechanical ventilation which includes NIV + HFNC

Chinese Respiratory Care Committee³

For mechanically ventilated patients COVID-19 patients, it is recommended to use a vibrating mesh nebuliser.

ISAM (International Society of Aerosols in Medicine) Interim Guidance⁴

Aerosol delivery guidance: Vibrating mesh nebulisers sit above the circuit. Vibrating mesh nebulisers maintain pressure without breaking the circuit. No use of external gas flow.

AARC Guidance⁵

“If a nebuliser must be used during mechanical ventilation, a closed system that does not break the circuit is desirable.”

Indian Chest Society Guidance⁶

Avoid the use of jet nebuliser of pMDIs for aerosol delivery to ventilator-dependent patient with COVID-19 due to the breakage of the circuit for the placement of the device before aerosol therapy.

Indian Position Statement⁷

In a ventilated patient, use of pMDI or a jet nebuliser will require disruption of closed circuit and therefore cannot be recommended.

Mesh nebulisers should be used whenever an aerosolized drug is to be delivered.

PUBLICATIONS SUPPORTING AEROGEN/CLOSED CIRCUIT

Ari A, 2020¹
Respiratory Medicine Journal

“Do not use a jet nebuliser or pMDIs for aerosol delivery to ventilator-dependent patients with COVID-19 due to the breakage of the circuits for the placement of the device before aerosol therapy.”

No break in vent circuit.

Miller A, 2020²
Journal Critical Care Medicine

Letter to the editor Journal of Critical Care.

 “[Aerogen] closed system requires minimal staff handling and no circuit opening, thereby reducing workload and increasing safety.”

Kumar S, et al. 2020³
Expert Review Respiratory Medicine

Use of jet nebulisers or pMDIs should be avoided due to the breakage of the circuit required for the placement of the devices.

Mesh nebulisers must be used as their design allows medication to be added without breakage of the circuit.

Kaur R, et al. 2020⁴
Critical Care

Mesh nebulisers can reduce the need to break the ventilator circuit when nebulisation is provided during invasive ventilation.

For more information visit: www.aerogen.com/covid-19