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COVID-19

There is still a lack of evidence on the right moment of intubation, the role of HighFlow Nasal Cannula (HFNC) and CPAP/NIV and when prone positioning should be used. However, recommendations gathered from four reviewed guidelines and available literature at least give some direction.

Non-invasive respiratory support

1.

SUPPLEMENTAL, CONVENTIONAL OXYGEN SUPPLY X

O₂

- Maintain SaO₂ ≤96%¹
- Suggested for patients with SaO₂ <92%¹
- Recommended for patients with SaO₂ <90%¹

2.

HFNC AND CPAP/NIV



- Generally suggested by most guidelines reviewed
- Recommended for patients with HRF P/F= 100-300²
- Conditionally recommended for patients SaO₂ ≤92% despite conventional oxygen at >6l/min at FiO₂ = 0,4³
- No recommendation on preference for HFNC or CPAP/NIV or NIV via helmet or mask.

3.

AWAKE PRONE POSITION

Prone

- No clear recommendation across reviewed guidelines due to lack of evidence
- Consider awake prone position as adjunct therapy during any form of supplemental oxygen in not intubated patients for up to 3 hours per day as tolerated.³
- Consider awake prone position only if no immediate indications for invasive mechanical ventilation are present (ERS)⁴
- Precautions: Awake prone positioning requires the maintenance of close monitoring and the presence of well-skilled health care staff.⁵

4.



Timing

TIMING FOR INTUBATION

Still under discussion, no strong evidence available. All reviewed guidelines recommend close patient monitoring in order not to miss right point for intubation.

Very few clear recommendations are available:

- Consider intubation and mechanical ventilation in severe hypoxemia (P/F <150mmHg) and respiratory rate >30/min.²
- General recommendation to intubate patients with P/F <100mmHg²

Criteria for intubation decisions described by Pisano and colleagues:⁶

- Need for airway protection (alteration of consciousness)
- Severe decompensated acidosis (e.g. pH <7.2-7.25)
- Severe absolute hypoxemia (PaO₂ <50mmHg or SaO₂ <90%-92%) despite maximal non-invasive respiratory support
- Signs and symptoms of significant respiratory distress or tissue hypoxia despite max. non-invasive respiratory support



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