High flow therapy (HFT) has been used widely during the COVID-19 pandemic. Published clinical experience is based mainly on retrospective studies and describes the main settings and the failure rate.

In these studies, the flow setting at the start of HFT was between 30 L/min and 60 L/min (1-9). Oxygen was between 60% and 100% at initiation (1, 5), and adjusted to target SpO2 of greater than 90% (2, 8).

The temperature was set to between 31°C and 37 °C (2, 4, 7, 8).

Flow is usually set to cover the patient's minute volume ventilation, and is then adjusted according to the patient's tolerance. Oxygen is adjusted dynamically based on SpO2 values and blood gas analysis. The temperature is adjusted according to the patient's comfort, but the higher the temperature, the higher the humidity provided.

Clinical protocol

1. When to start HFT?

If a COVID-19 patient remains hypoxemic despite conventional oxygen therapy, recommendations suggest using HFT over conventional oxygen therapy (10).

2. Initial settings:

- Flow = 60 L/min
- Temperature = 37° to provide optimal humidity
- Oxygen = 100%

3. Adjustments:

- Oxygen should be adjusted to target SpO2 between 92% and 96% (10)
- Use oxygen flushes (oxygen set at 100% for 2 minutes) before each mobilization
- With such a high flow, a temperature setting of 37°C is usually well tolerated
4. How to wean from HFT?

- When the patient’s condition has stabilized (i.e., 12 hours with oxygen at 50%), try to decrease Flow to 50 L/min
- When the patient has 40% Oxygen, decrease the flow to 40 L/min
- Try to stop HFT each day when Oxygen is less than 40% and Flow is less than 40 L/min

Adjunctive treatments

When Oxygen is higher than 50%, HFT can be combined with prone positioning or CPAP.

References


