

Dyspnea in Mechanically Ventilated Patients



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Educational background

2002-2006 Ph.D., Physiology and Physiopathology
2000-2002 Research Fellowship, McGill University, Meakins and Christie Laboratories, Montreal, Canada
1994-2000 Residency, Pulmonology and Critical Care, Paris (Included a M.A. in Physiology)
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Professional experience

2016-Present Medical Director of the Intensive Care Unit and the Weaning Centre, La Pitié-Salpêtrière University Hospital, Sorbonne University Medical Center
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Dyspnea is defined as “the symptom that conveys an upsetting or distressing experience of breathing awareness”. In other words, dyspnea describes “unpleasant and frightening breathing sensations” (European Respiratory Society (ERS) / European Society of Intensive Care Medicine (ESICM)). Approximately 40% of communicative intubated patients report dyspnea; it strongly suggests that dyspnea is commonly underestimated by clinicians in their daily practice, especially in non-communicative patients who are exposed to dyspnea but who cannot self-report it. The most common median value of dyspnea reported is 5 on numerical rating scale from 0 (no dyspnea) to 10 (worst dyspnea imaginable). As a comparison, similar pain ratings would probably be judged unacceptable by stakeholders and constitute guidelines threshold for prompt analgesia. Of notice, dyspnea can be far worse than pain, in that it is constantly associated with the fear of dying.

Beyond the terrible sensation that it conveys, dyspnea has many deleterious consequences. Intubated patients with dyspnea are more likely to present with anxiety. In addition, dyspnea is associated with dark “respiratory” recollections of ICU stay, dyspnea being reported as the second worse memory of ICU stay after poor sleep. Finally, that dyspnea contributes to the onset of post-traumatic stress disorders.

Once dyspnea has been detected, relieving dyspnea should be the ultimate goal of caregivers. Unfortunately, dyspnea presents a greater challenge to symptom management than pain. Beside and before pharmacological intervention like opioids, a variety of therapeutic approaches could efficiently relieve dyspnea in intubated patients. These include, not extensively, 1) adjustments of ventilator settings, 2) inspiratory muscle training, 3) fooling the brain with provision of supplemental high-flow nasal cannula, fan therapy on the face and 4) mitigate emotional response to dyspnea using relaxing music. Because of the multidimensional nature of dyspnea this is also likely that a unique intervention would not be sufficient to relieve dyspnea and that bundle of intervention targeting the multiple dimensions of dyspnea should be preferred.

References

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