



Noninvasive ventilation in prehospital settings

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Abstract:

The prehospital use of noninvasive ventilation (NIV) by emergency medical services is increasing. Applying NIV in the prehospital setting began to gain more attention in the late 1990s when the primary form of noninvasive positive pressure ventilation emerged as a substitute to endotracheal intubation. For the last several years, NIV has become the standard of care for acute cardiogenic pulmonary edema and exacerbation of chronic obstructive pulmonary disease patients in the prehospital setting. A remarkable number of studies demonstrate a reduction in mortality and intubation rates in comparison to standard care when NIV is initiated in the prehospital setting, though there is a lack of evidence to strongly recommend the use of prehospital NIV as a first choice. An in-depth understanding of the science and technological background of NIV machines and interfaces can help attending clinicians in the prehospital setting and thus enhance therapeutic effectiveness by maximizing patient comfort, safety, and stability. Selections of the patients, devices, and interfaces, as well as achieving good patient-ventilator synchrony, are the key aspects of a successful outcome.

Biography:

Mr Jithin has completed his Masters in Respiratory Care at the age of 25 years from Amrita University and currently doing his PhD in respiratory care at Srinivas University, India. He is the Academic Superintendent & Lecturer at Department of Respiratory Care, Prince Sultan Military College of Health Sciences under Ministry of Defense and Aviation, Kingdom of Saudi Arabia a premier alliead health sciences college in the Middle East. He is also the General Secretary of the prestigious Indian Association of Respiratory Care. He has published more than 14 papers in reputed journals and has been serving as an editorial board member of Indian Journal of Respiratory Care. (Up to 100 words)

Recent Publications:

- Ram FS, Picot J, Lightowler J, Wedzicha JA. Non-invasive positive pressure ventilation for treatment of respiratory failure due to exacerbations of chronic obstructive pulmonary disease. Cochrane Database Syst Rev 2004;1:CD004104.
- 2. Li H, Hu C, Xia J, Li X, Wei H, Zeng X, et al. A comparison of bilevel and continuous positive airway pressure noninvasive ventilation in acute cardiogenic pulmonary edema. Am J Emerg Med 2013;31:1322-7.
- 3. Bakke SA, Botker MT, Riddervold IS, Kirkegaard H, Christensen EF. Continuous positive airway pressure and noninvasive ventilation in prehospital treatment of patients with acute respiratory failure: A systematic review of controlled studies. Scand J Trauma Resusc Emerg Med 2014;22:69.
- 4. Hörmann C, Baum M, Putensen C, Mutz NJ, Benzer H. Biphasic positive airway pressure (BIPAP)-a new mode of ventilatory support. Eur J Anaesthesiol 1994;11:37-42.
- 5. Joshi N, Estes MK, Shipley K, Lee HD, Zaurova M. Noninvasive ventilation for patients in acute respiratory distress: An update [digest]. Emerg Med Pract 2017;19:S1-2.

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