

## **MAY NONINVASIVE VENTILATION FACILITATE SAFE BRONCHOSCOPY PERFORMANCE IN PATIENTS WITH RESPIRATORY FAILURE?**

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**Introduction:** Respiratory failure (RF) is one of the vital bronchofiberscopy (BF) contraindications and risk factors. However, bronchoscopy is required for numerous pulmonary diseases for accurate diagnosis and patient treatment.

**Materials and methods:** Herein we present a series of examples of noninvasive ventilation (NIV) used as a bridge for diagnostic and therapeutic BF in selected patients with acute, chronic or exacerbation of chronic respiratory failure in course of COPD, cystic fibrosis, intestinal diseases, neuromuscular diseases or foreign body aspiration.

**Results:** Assessed patients were hypoxemic before BF, half of them with PaO<sub>2</sub>/FiO<sub>2</sub> below <200 which reveals respiratory failure diagnostic for acute respiratory distress syndrome. The procedures were performed for diagnostic reasons: diagnostic BAL in interstitial lung disease, severe pneumonia with a need for bacterial sampling, diagnosis RF exacerbation reason in a patient on home NIV, hemoptysis, mucous plugging removal in cystic fibrosis patient, airway assessment previous unsuccessful weaning from mechanical ventilation. All procedures were performed with the use of NIV in spontaneous over-time (S/T) mode with oxygen supplementation. There were no complications such as hypoxemia, in the course of the procedure. All patients were dismissed from the department, however one required transfer to the ICU, but the decline in clinical status was not due to the BF the underlying disease.

**Conclusion:** NIV may be considered a useful tool, facilitating BF-performance in patients with numerous severe pulmonary diseases and secondary hypoxemia. NIV application enabled bf performance in patients who in other circumstances would require intubation for BF-performance.