European Respiratory Society
Annual Congress 2013

Abstract Number: 1280

Publication Number: P2473

Abstract Group: 2.2. Noninvasive Ventilatory Support

Keyword 1: COPD - management **Keyword 2:** Chronic disease **Keyword 3:** Mechanical ventilation

Title: Long term non-invasive ventilation (LT-NIV) reduces mortality and the risk of hospital readmission in systemic COPD patients

Mr. Jean-Christian 11364 Borel JCBorel@chu-grenoble.fr [1,2], Prof. Jean-Louis 11365 Pepin JPepin@chu-grenoble.fr MD [1,2], Prof. Christophe 11367 Pison CPison@chu-grenoble.fr MD [3], Mr. Aurélien 11393 Vesin aurelien.vesin@ujf-grenoble.fr [4], Dr. Jésus 11399 Gonzalez-Bermejo jesus.gonzalez@psl.aphp.fr MD [5], Dr. Isabelle 11401 Court-Fortune isabelle.court_fortune@chu-st-etienne.fr MD [6] and Prof. Jean-François 11405 Timsit JFTimsit@chu-grenoble.fr MD [4,7]. [1] HP2 Laboratory (Hypoxia: Pathophysiology), Université Grenoble Alpes; Inserm, U1042, Grenoble Cedex 09, France, 38043 ; [2] Laboratoire EFCR, Pôle Locomotion Rééducation Et Physiologie, CHU De Grenoble, Grenoble Cedex 09, France, 38043 ; [3] Clinique Universitaire De Pneumologie, Pôle Cancérologie Médecine Aigue Et Communautaire, CHU De Grenoble, Grenoble Cedex 09, France, 38043 ; [4] INSERM U823, Centre De Recherche Institut Albert Bonniot, La Tronche, France, 38700 ; [5] Service De Pneumologie & Réanimation, Groupe Hospitalier Pitié-Salpêtrière, Paris, France, 75013 ; [6] Service De Pneumologie, CHU Nord, Saint-Etienne, France, 42055 and [7] Réanimation Médicale, Pôle Cancérologie Médecine Aigue Et Communautaire, CHU De Grenoble, Grenoble Cedex 09, France, 38043 .

Body: Aim: COPD is a heterogeneous condition with different phenotypes leading to distinctive causes of hospitalization and mortality. We hypothesized that LT-NIV would differently impact on the prognosis of “respiratory” COPD with severe airflow obstruction and “systemic” COPD with a milder airflow obstruction but higher rates of obesity and co-morbidities. Methods: Multicentre prospective cohort of COPD patients treated by home LT-NIV. Co-morbidities, clinical conditions, respiratory parameters were recorded at NIV initiation. Follow-up data included vital status, daily use of NIV and hospitalizations. The impact of daily use of NIV on mortality/hospitalization for acute exacerbations was tested by an adjusted Cox model. Results: 213 patients (59% respiratory COPD) were included (median follow-up 47 months). 44% patients died during the study. After adjustment on other prognostic risk factors, respiratory COPD was associated with a higher rate of death or readmission than systemic COPD [70 vs 42%]. For the whole group, a daily use of NIV > 9h/day was associated with an increased risk of death or hospital readmission [HR=1.7; 95 CI: 1.1; 2.5]. Figure 1, displaying a U-shape, shows that intermediate daily NIV use was associated with a better prognosis only in systemic COPD [>5 h/day: HR=0.4; 95CI: 0.2; 0.9]. Conclusion: LT-NIV improves prognosis only in adherent systemic COPD.