Title: Prognosis and evolution of COPD patients hospitalized and treated with non invasive ventilation

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Body: OBJECTIVES: To evaluate the short and long term prognosis of COPD patients admitted in the hospital with an episode of hypercapnic ARF (acute respiratory failure) who required non invasive ventilation (NIV). MATERIAL AND METHODS: Prospective study, consecutive inclusion of COPD patients admitted from Feb-09 to April-12 because ARF with acidosis and hypercapnia and who were treated with NIV. A group of patients were discharged home with BiPAP. We analysed mortality and readmissions from the discharge date to Sep-12. RESULTS: N= 263, Mean age: 73; Males 93%; Symptoms sleep apnea: 15%; Obesity: 37%; Smokers: 14%; Ex-smokers: 83%; The hospital mortality was 13%. Important factors in hospital mortality were: older age, more previous admissions, lower pH and higher PaCO2 at the beginning and in the end, the need for higher FiO2 and patients with therapeutic effort limitation (p <0.005).

During follow up the outside mortality was 51.52% and the median survival rate was 770 days. Analyzing the survival rate between patients with BiPAP vs without, we obtained an average of 928 days in the first vs 778 days in the second group (p=n.s.). CONCLUSIONS: 1. In our study, mortality during hospital admission of COPD patients with ARF treated with NIV is low. 2. Mortality in these patients during follow-up was high, being higher in older patients and who had more number of readmissions; remaining similar in those who were discharged at home with and without NIV.