

European Respiratory Society Annual Congress 2012

Abstract Number: 3029
Publication Number: 4563

Abstract Group: 2.2. Noninvasive Ventilatory Support

Keyword 1: Acute respiratory failure **Keyword 2:** Ventilation/NIV **Keyword 3:** COPD - exacerbations

Title: Outcome of acidotic COPD-patients on hospital admission

Dr. Sylvia 13270 Hartl sylvia.hartl@wienkav.at MD ¹, Prof. Mike 13271 Roberts "Prof. C.M.Roberts" c.m.roberts@qmul.ac.uk MD ² and Prof. Jose Luis 13272 Lopez-Campos lcampos@separ.es MD ³. ¹ Dep. of Respiratory and Crit. Care, Otto Wagner Hospital, Vienna, Austria, 1140 ; ² Dep. of Respiratory Medicine, Hospital Universitario Virgen del Rocío, Instituto de Biomedicina de Sevilla (IBiS), Spain and ³ Dep. of Resp. Medicine, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, United Kingdom .

Body: Background: Acidosis is a marker of acute respiratory failure in COPD. Non invasive ventilation (NIV) is the first choice of ventilation for such patients to avoid intubated mechanical ventilation (IMV) and associated complications. The ERS COPD Audit evaluated the clinical practice of treatment standards in acute exacerbation of COPD(AECOPD) in 422 hospitals of 13 European countries. We present the analysis of treatment standards for acidotic AECOPD patients and associated outcomes. Methods: Data collection of clinical treatment of all hospital admitted AECOPD for 8 weeks and follow up until 90 days after discharge. Results: Of 12893 patients 18,8% (2429/ 66%male) presented with respiratory acidosis on admission(14,8%(n=1902) with moderate acidosis: ph 7,35≥7,25, 4,1%(n=526) with severe acidosis: ph ≤7,25). Acidotic patients were significantly sicker than non acidotic.

Table 1

	FEV1% pred	% current smoker	% diabetes	% renal failure	% congestive heart failure
non acidotic patients n=10464	43,8	30,4	19,2	5,2	19,3
acidotic patients n=2429	37,1 p=0,001	36,3 p=0,001	23,0 p=0,001	6.9 p=0,001	21,3 p=0,016

Outcomes were related to severity of acidosis.

Table 2

	non acidotic patients	moderate acidotic patients	severe acidotic patients	p ≤ 0,01
Length of stay (d)	9±8	10,7±8	14±20	p=0,001
%hospital mortality	3,8	8,8	17,1	p=0,001
%90 d-readmission	35,1	37,8	42,9	p=0,001

43% of the acidotic patients received NIV and 5 % IMV. 89,6% of hospitals offered NIV in their unit but only 66,7% always had the capacity for all eligible patients. Summary: Our data revealed a severe comorbid condition of acidotic COPD patients, a subgroup of AECOPD- patients with worse outcome. A high proportion received NIV, units accepting these patients should offer NIV.