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Title: Early readmission after hospitalization for acute exacerbations of chronic obstructive pulmonary disease (AECOPD) is associated with high mortality

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Body: BACKGROUND: Patients who survive acute hospitalized exacerbations of chronic obstructive pulmonary disease (AECOPD) are at high risk of readmission for COPD and death. Half of these readmissions occur within the first seven weeks after discharge. OBJECTIVES: To assess the clinical difference between patients with early (within 7 weeks) and late readmissions for AECOPD after hospitalization for AECOPD and identify determinants associated with early readmissions for AECOPD. METHODS: In a retrospective, observational cohort study including all consecutive patients admitted between January 1, 2009, and April 1, 2010, for AECOPD we identified 91 patients who had at least 1 readmission for AECOPD during 1 year follow-up. Readmission within 49 days was defined as an early readmission based on Kaplan-Meier analysis. Uni- and multivariate analysis was used to analyse differences between early and late readmissions and to identify predictors for early admission. RESULTS: 47 patients were “early re-admitters”. Mortality was significantly higher (n=19, 40% vs. n=10, 23%, p<0.05). Univariate analysis shows that male gender, respiratory tract infection at index admission, ALAT >45 u/l and signs of heart failure on chest X ray were significantly associated with early readmissions. Base excess > 2.5 mmol/l at discharge was associated with a prolonged readmission free interval. Living not at home was the only independent factor for early readmisisons [HR =2.146; 95% CI=1.065-4.323]. CONCLUSIONS: The “early re-admitters” for AECOPD have a significantly increased mortality rate. Living at own house is associated with reduced risk to be an “early re-admitter”.