

# What are the Most Effective Factors in Determining Future Exacerbations, Morbidity Weight and Mortality In Patients Hospitalized with COPD Attack? A Prospective Study

Çağla Koç<sup>1</sup> and Füsün Şahin<sup>2</sup>

<sup>1</sup>Ministry of Health, Erbaa State Hospital, Tokat/Turkey.

<sup>2</sup>University of Health Sciences, Yedikule Chest Diseases and Thoracic Surgery Training and Research Hospital

July 22, 2021

## Abstract

**INTRODUCTION:** The aim of this study was to investigate the important factors affecting the COPD prognosis. **MATERIAL AND METHODS:** We included 160 hospitalized patients with COPD exacerbation in the study. Hemoglobin-HB, hematocrit-HCT, leukocyte, red cell distribution width- RDW, mean platelet volume, platelet distribution width, plateletcrit, platelet, neutrophil / lymphocyte ratio, platelet / lymphocyte ratio, eosinophil, uric acid, albumin, CRP, procalcitonin, arterial blood gases (PO<sub>2</sub>, PCO<sub>2</sub>) pulmonary function test (FEV<sub>1</sub>, FVC), echocardiography (ejection fraction-EF) GOLD stage, MMRC and BORG scales, Charlson comorbidity index, body mass index-BMI, length of hospital stay were examined on the first day of hospitalization. Admission to the hospital with a new attack, hospitalization in the intensive care unit-ICU, and mortality during the 6 months after discharge were evaluated. **RESULTS:** High CRP and procalcitonin values were observed in the group with long hospital stay. In mortality group, HB, HCT, BMI and PO<sub>2</sub> values were significantly lower than the group without mortality while age and GOLD stage were higher. The age, BORG and MMRC scores, number of exacerbations experienced in the previous 1 year, RDW, eosinophil count, PCO<sub>2</sub> were significantly higher in the ICU group than without ICU. HCT, EF values were lower in the ICU group than without ICU. FEV<sub>1</sub>, FVC values were significantly lower in follow-up attack group than without attack; the duration of COPD and the number of experienced in the previous 1 year were high. **CONCLUSION:** It has been concluded that the scoring combining selected biomarkers and other factors will be stronger in determining the prognosis.

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