

THE RELATIONSHIP BETWEEN SERUM URIC ACID LEVEL AND URIC ACID / CREATININE RATIO WITH COPD SEVERITY (STABLE OR ACUTE EXACERBATION) AND THE DEVELOPMENT OF COR PULMONALE

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Abstract

BACKGROUND:There are studies reporting that uric acid elevation is a marker for hypoxemia and pulmonary hypertension secondary to some diseases. **AIM:** The aim of this study is to investigate the relationship between serum uric acid level and uric acid/creatinine ratio with COPD exacerbation, hypoxemia in exacerbation and development of cor pulmonale. **METHODS:** A total of 96 COPD patients who were admitted to Ondokuz Mayıs University Faculty of Medicine emergency department and Chest Diseases outpatient clinic and whose written consent was obtained, were included in our study. 43 of these patients were in the period of exacerbation (Group 1) and 53 were in the stable period (Group 2). Complete blood count, blood biochemistry (including serum uric acid level) and arterial blood gas analysis were performed in our patients. In addition, spirometry and echocardiography findings were examined. **RESULTS:** Serum uric acid level of Group 1 was 6.97 ± 1.34 and Group 2 was 4.30 ± 1.01 ($p < 0.05$). Uric acid/creatinine ratios; in group 1; 8.00 ± 2.06 , in group 2; It was 5.52 ± 1.57 ($p < 0.05$). In patients with hypoxemia, serum uric acid level and uric acid / creatinine ratio were significantly higher than non-hypoxemic ($p < 0.05$). Serum uric acid level and serum uric acid/creatinine ratio of Group 1 were significantly higher than Group 2 ($p < 0.001$). Serum uric acid level and serum uric acid / creatinine ratio of patients who developed cor-pulmonale were significantly higher than patients without cor-pulmonale ($p < 0.05$). **CONCLUSION:** Serum uric acid level and uric acid/creatinine ratio were found to be higher in patients with exacerbation of COPD and those developing cor pulmonale. Consequently, it suggests that serum uric acid level and serum uric acid/creatinine ratio may be a stimulating laboratory test for the severity of COPD and the development of COPD based cor pulmonale.

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