**Gamma Glutamyl Transferase in Acute Exacerbation of Chronic Obstructive Pulmonary Disease**

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**Introduction:** Gamma-glutamyl transferase (GGT) is a liver enzyme that is involved in inflammation and oxidative stress. It has been hypothesized that elevated GGT may occur secondary to oxidative stress in acute exacerbation of chronic obstructive pulmonary disease (AECOPD) and can be used as an indicator of inflammation in these patients. This study aimed to determine the relationship among serum GGT levels, arterial blood gases, and disease severity in patients with AECOPD.

**Methods**: Patients with AECOPD were evaluated for disease severity based on the global initiative for chronic obstructive lung disease (GOLD), Modified British Medical Research Council (mMRC), ‍COPD Assessment Test (CAT), and spirometry assessment upon admission at the hospital. Moreover, GGT level in patients was analyzed based on the severity of the disease.

**Results:** The mean±SD CAT score in the patients was obtained at 19.6± 4.6. According to mMRC scale, most patients were grade 2 (n=29, 52.7%) and grade 1 (n=17, 30.9%), respectively. In addition, according to GOLD criteria, most patients (n=34, 61.8%) had moderate and severe (n=16, 29.1%) disease, respectively, according to CAT. The results showed a significant positive relationship between GGT level and disease severity (r=+0.277, P=0.04). Moreover, a significant negative relationship was observed between GGT level and forced vital capacity (FVC) (r=-0.268, P=0.04). There was no significant relationship between GGT level with arterial HCO3, PCO2, PO2, FEV1, and FEV1/FVC.

**Conclusion:** In summary, it is suggested that serum GGT levels have no clinical efficacy in differentiating patients with different intensities of AECOPD periods.

**Keywords:** Acute exacerbation, Chronic obstructive pulmonary disease, Gamma-glutamyltransferase