

## Comparison of oral Theophylline with Atorvastatin in reduction of serum CRP levels in patients with chronic obstructive pulmonary disease COPD

### Abstract

**Background and Objectives:** The importance of the issue and necessary design: characteristic of the COPD disease is progressive restriction in airflow that caused by chronic inflammation in the airways, parenchyma and pulmonary vascular network. CRP listed as a systemic marker to demonstrate the inflammatory process that occurs in patients with COPD. This study done to evaluate the comparative effect of Atorvastatin and Theophylline in decrease CRP level in COPD patient hospitalization in Emam Khomeyni hospital.

**Material and Methods:** 99 patients with COPD that hospitalization in Emam khomeyni hospital were choose and divided into 3 groups with 33 patients with randomize blocking method. After evaluated of CRP level and performing CAT test in one group were give Theophylline and COPD routine management, in one group were give Atorvastatin and COPD routine management and in one group were give Placebo and COPD routine management. After two weeks evaluate CRP level and performed CAT test. Data obtained from this study was analyzed with SPSS 20 software.

**Results:** 3 groups before the intervention showed no significant differences in demographics, smoking and CAT score. The 3 groups showed no significant difference in reduction of CRP serum level and CAT score.

**Conclusion:** the present study showed that the Theophylline and Atorvastatin are not effective at reducing the CRP serum level and CAT score. Therefore, further studies in anti-inflammatory effect Theophylline on Macrophages and comparison that with Neutrophils are recommended.

**Key words:** oral Theophylline- Atorvastatine- COPD- CRP serum level