

DOI: 10.5152/TurkThoracJ.2019.67

[Abstract:0710] MS-097 [Accepted: Oral Presentation] [COPD]

## What Are the Differences Between Smoker and Nonsmoker Copd Cases? Is it a Different Phenotype?

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**Objectives:** Chronic obstructive pulmonary disease (COPD) is increasing in prevalence and mortality. COPD has also been described in non-smokers with a variable frequency. There has been a lack of focus on the non-smokers. This study evaluated the differences between smoker and nonsmoker COPD cases and risk factors, characteristics of nonsmoker COPD cases.

**Methods:** This was a retrospective study performed in an outpatient clinic of a research hospital between 1.1.2018-31.12.2018. Patients with postbronchodilator FEV1/FVC values below 0.70 were included in the study. Age, gender, smoking status, biomass exposure, number of attacks, passive smoking, history of infection in childhood, smoking in mother and father, presence of additional diseases, symptoms, BMI, FEV1, FVC, FEV1/FVC values were recorded. Comparisons of variables were made by student t test. The comparisons were made with Chi-square test methods. When  $p < 0.05$ , it was accepted statistically significant.

**Results:** 706 patients were included in the study. Of the patients, 93 were female and 613 were male. The patients were divided into two groups as smokers and non-smokers. 578 (81.9%) patients were smoker, and 128 (18.1%) were non-smokers. Mean age of both groups were similar. 59% of the non-smokers were male and 41% were female. There was a significant difference between the two groups in terms of gender. COPD was more common in female in non-smokers than smokers. Biomass exposure was significantly higher in non-smokers. No significant difference was observed between smokers and nonsmokers for attack rates in previous year. Passive smoking, the history of infection in childhood, smoking in the mother and father during childhood were significantly higher in the non-smoker group. Among the additional diseases, CHF was found to be significantly higher in non-smokers. Other comorbid diseases were observed at a similar rate. In terms of symptoms, the rate of cough was higher in nonsmokers, and the sputum was higher in smokers. BMI of the nonsmokers was significantly higher. FVC values of non-smokers were lower and FEV1/FVC values were significantly higher.

**Conclusion:** It was observed that 18% of the COPD patients did not smoke. The rate of female patients was higher in non-smoker COPD patients, BMI was higher and the degree of obstruction was better. It was thought that non-smoker COPD patients could be evaluated as a different phenotype and this difference may lead to a change in the treatment approach.

**Keywords:** Nonsmoker, COPD, smoker, risk factors