

## LETTER TO EDITOR

# Prevalence of Mycoplasma Pneumoniae Infection in Patients with COPD Exacerbation; a Letter to the Editor

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Dear editor; Currently, control and prevention of respiratory illnesses is considered a health priority in most developed countries and managing the risk factors is necessary for improving the population's health (1, 2). Chronic obstructive pulmonary disease (COPD) is the 5th cause of death around the world and estimations have indicated that due to an increase in environmental pollution, this disease will become the 3rd cause of death in the future (1, 3).

In previous studies, pulmonary infection with mycoplasma pneumoniae has been introduced as one of the causes for COPD exacerbation. Mycoplasma pneumoniae affects the upper and lower respiratory tract and its clinical manifestation is trachea-bronchitis accompanied by restlessness and dry coughs (4, 5). The pathogenesis spectrum of this bacterium ranges from mild pharyngitis and trachea-bronchitis to acute pneumonia. Epidemiologic studies have shown that this bacterium is responsible for more than 20% of community acquired pneumonias (6).

In a cross-sectional study by the authors of the present letter, 66 patients over the age of 18 years who had presented to the emergency department of Imam Reza Hospital, Mashhad, Iran, with diagnosis of COPD exacerbation were evaluated. Sputum sample of the patients was obtained and sent to the laboratory for performing polymerase chain reaction (PCR). Mean age of the patients participating in this study was  $67.28 \pm 13.68$  years (60.6% male). The result of PCR was positive in 6 patients out of the total of 66 patients (9.1%). The results of the present study showed that there was no correlation between age ( $p=0.18$ ), sex ( $p=0.25$ ), duration of being affected with COPD ( $p=0.20$ ), consumption of an-

tibiotics ( $p=0.35$ ), smoking ( $p=0.62$ ), opioid abuse ( $p=0.44$ ), corticosteroid use ( $p=0.57$ ), underlying illness ( $p=0.94$ ) and health care-associated pneumonia (HCAP) ( $p=0.46$ ) with mycoplasma infection. However, prevalence of leukocytosis ( $p=0.01$ ) and myalgia ( $p=0.02$ ) was significantly higher in the mycoplasma group.

Numerous studies have confirmed the presence of mycoplasma pneumoniae in exacerbation of COPD using serologic diagnosis. For instance, in a study by Lieberman et al. (7) prevalence of mycoplasma pneumoniae in patients with COPD exacerbation was reported as 14.2% and in Meloni et al. (8) study the prevalence of this infection was expressed to be 6.7%. These rates were reported between 5% and 14% in other studies (9-11).

Thus, it seems that prevalence of mycoplasma is high in COPD exacerbation, but there is still no answer to the question if this infection results in exacerbation of COPD or not and there is controversy between the studies in this regard (4, 7, 12). Therefore, it is suggested to design case-control or cohort studies to find the answer to this question.

## 1. Appendix

### 1.1. Acknowledgements

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### 1.2. Author's contribution

All the authors of this article met the criteria of authorship based on the recommendations of the international committee of medical journal editors.

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### 1.3. Conflict of interest

Hereby, the authors declare that there is no conflict of interest regarding the present study.

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All the costs of the present study were paid by the researchers.

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