IDENTIFYING THE MOST COMMON TRIGGERS OF SEVERE ACUTE EXACERBATIONS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (AECOPD) LEADING TO HOSPITALIZATION: A RETROSPECTIVE STUDY

PAVLIC F.[1], Pelin M.[1], Popović-Grle S.[1, 2]

[1] School of Medicine, Zagreb, Croatia
University of Zagreb

[2] Clinical Hospital Centre, Zagreb, Croatia
Clinic for Lung Diseases Jordanovac

Objective:

Chronic obstructive pulmonary disease (COPD) is the third leading cause of death worldwide, causing 3.23 million deaths in 2019. An exacerbation of chronic obstructive pulmonary disease (AECOPD) is defined as an event characterized by increased dyspnea and/or cough and sputum that worsens in < 14 days which may be accompanied by tachypnea and/or tachycardia and is often associated with increased local and systemic inflammation caused by

infection, pollution, or other insult to the airways. Exacerbations are mainly triggered by respiratory viral infections although bacterial infections and environmental factors such as ambient air pollution and excess heat may also initiate and/or amplify these events. Patients with COPD are at increased risk of other acute events, particularly decompensated heart failure, pneumonia, pulmonary embolism that may also mimic or aggravate an AECOPD. By conducting this research, we aimed to gain a comprehensive understanding of the factors that frequently initiate exacerbations in a clinical setting.

Methods:

From February 2023 through May 2023, a retrospective study was conducted at the Department of Pulmonology, University Hospital Centre Zagreb. The study aimed to investigate patients with a previously diagnosed COPD (for more than six months), of either gender, between the ages of 47-86 years, who were primarily admitted due to an exacerbation. Non-probability consecutive sampling was used to identify eligible patients for inclusion in the study. Classification from the GOLD 2023 Report was used to classify the exacerbation in this study. Specifically, exacerbations classified as severe indicate that the patient required hospitalization or visited the emergency room.

Result:

Over the course of the study period, 14 patients were admitted to the hospital due to acute

exacerbation. Among them, six cases were attributed to bacterial etiology that could not be specified, while only one case was linked to viral etiology specifically COVID-19. The remaining seven cases were identified as having a non-infectious etiology.

Conclusion:

According to the GOLD Report 2023, exacerbations of COPD are primarily caused by

respiratory viral infections, bacterial infections, and environmental factors. However, our

study showed that only 50% of admitted patients had infectious exacerbations and 7% had

environmental factor. Remaining 43% had non-infectious etiology. It can be concluded that while infectious and environmental factors are the main triggers for most cases of COPD exacerbations, other comorbidities associated with the patients also play

a vital role.