

Keywords: COPD; Bronchiectasis; Characteristics; Association; Comorbidity; Sputum

Introduction

Chronic obstructive pulmonary disease (COPD), by its frequency, severity, and cost, constitutes a public health problem [1]. Patients with different COPD phenotypes may experience a varying natural history of their disease, including the association of COPD with bronchiectasis.

tuberculosis origin of bronchiectasis was ruled out by questioning, which did not find any history of taking anti-tuberculosis drugs, and by the absence of names of patients included in the district tuberculosis mandatory notification register. One hundred and twelve patients (108 men and 04 women) were enrolled [3]. These patients were classified into 02 groups: G1 (COPD without bronchiectasis) and G2 (COPD with bronchiectasis). At discharge, the length of hospitalization of each patient, as well as the number of COPD exacerbations per year, was noted. One month after their discharge from the hospital and during the COPD check-up, spirometry was performed for each patient to

average smoking variable was $50, 11 \pm 80$ P/Y in G1 and $56,47 \pm 37$ P/Y in G2. Average tobacco consumption [7], Charlson's index, sputum purulence, FEV1, mMRC, mean hospital stay, SGQR, CRP, and exacerbations during the past year were, respectively: 3.75 ± 7.44 , 48.7 ± 6 l / s, 3 ± 14 , 44, 48%, 48.7 ± 6 l / s, 3 ± 14 , 08 days, $34,51 \pm 14,23$, 25, and 0.89 in G1 compared to 4.26 ± 2.98 , 40.2 ± 3 l/s, 4 ± 66 , 64%, 12 days, $46,11 \pm 74.39$, 38, and 1.88 times in G2.

Discussion

COPD is a serious public health problem and a major cause of chronic morbidity and mortality in the world. A study [8] found

sputum purulence has been found to be associated with the presence of bronchiectasis, as reported by several authors. Inflammation plays an important role in the etiology of both conditions. One of the essential markers thereof is C-reactive protein (CRP). We found a significant correlation (OR=0.9662; 95% C.I =0.2187- 1.8286; p <0.001) between an increased level of CRP and the presence of bronchiectasis (38 in GP 2 vs. 25 in GP1). A. Ben Saad conducted a retrospective study on 423 cases of COPD, of which 84 had bronchiectasis, and no CRP difference in the two groups with or without bronchiectasis was reported. Tulek. B and M.Garcia [13] also reported in their respective studies a significant Odds Ratio relationship. Regarding the average length of hospitalization, Qihong Yu reported that the association of bronchiectasis with COPD does not appear to increase the length of hospital stay for an exacerbation of COPD (12.86±5.07 days in G2 vs. 11.56±4.06, p=0.113). The severity of the exacerbations, particularly those due to bacterial infections or pseudomonas aeruginosa, plays an important role in predicting a longer treatment and hospital stay. We found that the patients in G2 had a significantly longer hospital stay than G1 patients (12 vs. 8 days) with OR= 3.9617; 95% C.I =0.8972-5.4633 (p=0.014).

On the other hand, A.Molino and G.S.Muñoz, in their studies, reported the existence of this significant relationship.

The quality of life is found to be significantly impaired in patients with COPD and associated bronchiectasis. The total score of the Saint Georges questionnaire was higher in G2 group (34.51 ± 14 vs. 46.11 ± 74). (OR= 1.9442 95% C.I =0.3167- 3.7410; p = 0.032).

D. Carrillo [14] conducted a study in which the COPD Assessment Test (CAT) was performed on 96 patients with bronchiectasis (without COPD). The study of the quality of life and the research on possible depression should lead to proposing a specific treatment in the therapeutic protocol of these comorbidities.

Frequent exacerbations are a hallmark of the association between COPD and bronchiectasis. In our study, the number of exacerbations during the past year was higher in the bronchiectasis group.

Conclusion

Association between COPD and bronchiectasis could have important clinical implications since both diseases have different and complementary therapeutic approaches. The diagnosis of bronchiectasis should be more efficient in patients with COPD having

a severe respiratory deficit, purulent sputum, accelerated CRP, and deterioration in the quality of life [15].

Both chronic conditions seem to combine and worsen the psychological impact. The study of the quality of life considering this association is rare, indicating the need for further research.

References

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