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Relationship between depression and exacerbations in COPD: a response

To the Editors:

A well-conducted prospective study was published in a recent issue of the *European Respiratory Journal* (*ERJ*), which assessed the relationship between depressive symptoms, exacerbation frequency (as defined by the presence of two symptoms on 2 consecutive days), systemic inflammation, and social factors among 169 stable chronic obstructive pulmonary disease (COPD) patients [1]. QUINT *et al*. [1] found that patients with frequent exacerbations exhibited significantly more depressive symptoms than those with infrequent exacerbations.

The research of QUINT *et al*. [1] is unique because previous work [2] has mostly focused on cross-sectional links between depressive symptoms and admission for an exacerbation or mortality. As such, the prospective design used by QUINT *et al*. [1] is an important contribution to a field that still needs to be developed. However, the paper is limited by the fact that the authors did not assess anxiety symptoms or anxiety disorders. This is surprising given the fact that anxiety symptoms and anxiety disorders (*i.e.* clinical levels of anxiety) have been shown to be highly prevalent (up to 50%) and highly comorbid with depression (14–26%) in patients with COPD [3–5]. We, as well as others, have previously reported that anxiety disorders (*e.g.* generalised anxiety disorder, phobias) were even more prevalent than mood disorders (*e.g.* major depressive disorder, dysthymia) in patients with COPD (46–50% *versus* 17–38%, respectively) [3, 4]. The assessment of anxiety in addition to depression is important from both a methodological and a clinical standpoint because of the comorbidity issue, and because it is unclear whether the results of the study by QUINT *et al.* [1] are due to depression or nonassessed anxiety. For example, QUINT *et al*. [1] postulate that patients with elevated depression scores may report greater levels of breathlessness or perceive symptom changes more readily. However, breathlessness and increased symptom awareness (or hypervigilance) are actually hallmarks of anxiety rather than depression [5]. QUINT *et al.* [1] quite rightly point out that the Center for Epidemiologic Studies Depression Scale questionnaire has benefits over other questionnaires as it has less overlap with anxiety symptoms. However, had QUINT *et al.* [1] used a questionnaire like the Hospital Anxiety and Depression Scale or a brief psychiatric interview like the Primary Care Evaluation of Mental Disorders, this issue of anxiety *versus* depression would have been negated.

While we agree with QUINT *et al.* [1] that depression and depressive symptoms are important factors in patients with COPD, and that greater efforts are needed to identify and treat patients with such disorders, we also believe that failing to assess anxiety in addition to depression means that their results should be interpreted with caution.

As highlighted by WAMBOLDT [6], future research needs to consider differential clinical phenotypes and outcomes of chronic obstructive pulmonary disease patients with depression and/or anxiety compared to patients without either psychiatric disorder. It is essential that studies continue to evaluate the impact of depression and anxiety on chronic obstructive pulmonary disease patients so that appropriate treatments can be developed.

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STATEMENT OF INTEREST

None declared.

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Inhibition of the renin–angiotensin system in severe COPD

To the Editors:

In a recent issue of the *European Respiratory Journal*, ALBERT and CALVERLEY [1] analysed the treatment approaches in severe chronic obstructive pulmonary disease (COPD). However, they did not mention the effect of the inhibition of the renin–angiotensin system (RAS) in this setting.

Angiotensin converting enzyme (ACE) is present in very high concentrations in the lungs, and its activity is further increased by chronic hypoxia [2, 3]. Indeed, in patients with COPD, lower ACE activity may improve the efficiency of the peripheral use of oxygen and respiratory muscle function [3, 4].

Furthermore, mounting evidence suggests that COPD is characterised by systemic inflammation that might have an adverse impact on various extrapulmonary organs [5]. Interestingly, RAS blockade exerts an anti-inflammatory action in many systems [6].

Finally, even some side-effects related to therapy with inhibitors of the RAS, in certain instances, can prove beneficial in some patients with COPD. An intact and activated RAS has been shown to be an important determinant of erythropoiesis [7], and it has been found that the inhibition of the RAS may be a useful treatment for secondary erythrocytosis [8, 9]. Consequently, RAS blockade might have profound benefits in the long-term treatment of COPD-associated polycythaemia. Moreover, even cough, a well-characterised side-effect of ACE inhibitors, could be of some benefit in that it can decrease the risk of aspiration pneumonia in certain patient settings [10].

Therefore, we suggest that future studies should assess the overall health impact of renin–angiotensin system blockade in patients with chronic obstructive pulmonary disease.

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STATEMENT OF INTEREST

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