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Quality of Life in Patients With Idiopathic Pulmonary Fibrosis



Reevaluate the Treatment of Comorbid OSA

To the Editor:

We read with great interest the article by O'Brien et al¹ in a previous issue of *CHEST* (May 2020), in which the authors report that worse quality of life (QOL) in patients with idiopathic pulmonary fibrosis (IPF) is directly correlated with objective measures of disease severity and supplemental oxygen use.

Patient-reported health status is indeed a very important outcome; however, we would like to highlight that, although an OSA diagnosis was reported in 238 patients (28.0% of the total sample) in this study, it was not specified whether these patients received treatment with CPAP or other modalities and the degree of adherence to the proposed treatment. These factors (ie, therapy and adherence to it) independently represent two nonnegligible confounders in the research question.

It is known that sleep is markedly disturbed in patients with IPF; OSA is actually a highly prevalent comorbidity in IPF,² and nocturnal hypoxemia is relatively common (even in the absence of OSA), so that sleeping in IPF becomes a stressful "practice," mimicking that of maximal exercise.³ Sleep disturbances are associated with worse QOL and may also predict more rapid disease progression and increased mortality in patients with IPF.^{2,4} On the other hand, good adherence to CPAP use was proven to result in a significant improvement of sleep and of QOL after 1 year of treatment.⁵

We strongly believe that the treatment of sleep-disordered breathing in patients with IPF may improve their sleep, as well as their overall QOL, and also may modify beneficially the IPF prognosis and thus should be a field of meticulous research in the future.

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Careful Selection of Patients Is Required to Obtain Higher Potential Benefit From Mepolizumab Therapy



To the Editor:

We read with great interest the study of Kavanagh et al¹ in a previous issue of *CHEST* (August 2020) on mepolizumab efficacy in a real-world setting or assessment of baseline characteristics associated with response. The authors reported that mepolizumab therapy reduced exacerbation frequency and maintained oral corticosteroid requirements. Nasal polyposis, a lower BMI, and a lower maintained oral corticosteroids requirement at baseline were associated with better outcomes in the severe eosinophilic asthma cohort. We sincerely thank the authors for their substantial

contribution to the literature with such a valuable report. We also would like to share our opinions on this study.

A few entities caught our attention. First of all, the authors say that “we observed that responders were significantly older, had a higher BMI, and were more likely to have nasal polyposis than nonresponders.” The word *higher* in this sentence must be *lower*. Additionally, the authors say that “we are unaware of any further analyses of the utility of other baseline clinical characteristics in predicting response to mepolizumab therapy.” However, there are studies comparing baseline features in response to mepolizumab. In a post hoc analysis, individual patient-level meta-analysis of the MENSA (Efficacy and Safety Study of Mepolizumab Adjunctive Therapy in Subjects With Severe Uncontrolled Refractory Asthma) and MUSCA (Efficacy and Safety Study of Mepolizumab Adjunctive Therapy in Participants With Severe Eosinophilic Asthma on Markers of Asthma Control) studies showed that treatment with fixed-dose mepolizumab resulted in similar exacerbation rate reductions and similar improvements in St. George’s Respiratory Questionnaire and Asthma Control Questionnaire – 5 scores across all body weight/BMI categories.² In another study, there was no significant difference in terms of BMI between the mepolizumab responders group and the treatment failure group in severe eosinophilic patients with asthma. The responder groups had higher blood eosinophils and higher nasal polyps. However, ACQ superresponders had a lower baseline BMI.³ A recent real-life study evaluating clinical efficacy and predictors for treatment response to mepolizumab, baseline characteristics (sex, BMI, smoking history, allergies, baseline level of eosinophils) did not predict treatment response.⁴

The last point is that there seems to be a difference in the nasal polyposis rate and previous omalizumab treatment rate between responders and superresponders. Readers would be very grateful if the “*P* values” were given for comparison of the responders and superresponders in Table 4 because this is a very important comparison.

In conclusion, we thank Kavanagh and his colleagues for their contribution to the literature with such an important study. Careful selection of patients is required to achieve the higher potential benefit from mepolizumab therapy, considering the predictive factors.

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Response



To the Editor:

We thank Dr Yılmaz for identifying the error in one of the statements relating to BMI. As discussed in other parts of the manuscript,¹ higher BMI was associated with suboptimal response to mepolizumab. Dr Yılmaz references three related publications. The post hoc analysis of MENSA and MUSCA by Albers et al² examines outcomes in different BMI categories but not in other baseline characteristics of interest, and it does not address whether there were significant differences between BMI groups in their response to mepolizumab, instead only comparing each treated BMI group against overall placebo response. The study by Harvey et al³ was published after our manuscript submission; however, it is a welcome addition to the literature and mirrors our finding that a raised BMI was associated with a lesser response to mepolizumab. The study by Drick et al⁴ did not include exacerbation rate or maintenance steroid use in their responder definition, despite the fact that these were the primary outcome measures of interest in the phase 3 program, limiting the relevance of this analysis. To the last comment, the superresponders (Table 4) are a subgroup of the responders, so a *P* value is not given here.

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