Asthma-chronic obstructive pulmonary disease overlap syndrome: Is prediction feasible?

Sir,

We read the article on predictors of asthma-chronic obstructive pulmonary disease overlap syndrome (ACOS) in your journal with great interest.[1] ACOS is indeed a clinically important subset of chronic respiratory disease patient population and has been given a position as one of four classes of chronic obstructive pulmonary disease (COPD) by the Spanish COPD guidelines.[2] For better recognition of this overlap syndrome, a diagnostic criterion was also set which requires fulfillment of two major and two minor criteria.[3]

However, we consider that some key aspects need to take into account for a proper clinical extrapolation. First, in the mentioned article, the authors have tried to find the predictors of overlap syndrome. However, it appears that they have given importance to a change in postbronchodilator forced expiratory volume in 1 s (FEV1) or forced vital capacity (FVC) by 12% and 200 ml as diagnostic criteria for ACOS in patients with postbronchodilator FEV1/FVC <70%, which is actually one of the minor criteria.[1,3] We feel they should have used more than one parameter in criteria. Moreover, clinically significant bronchodilator response (≥15%)

can be elicited in the majority of COPD patients too.[4] Therefore, using 12% and 200 ml as the only cutoff value reduces the reliability and specificities of the predictors they mentioned.

Second, while we were going through Table 1, we also found some confusing data in context to range of percentage reversibility and volume reversibility. Table 1 under the column of non-ACOS shows a range from minus to plus value which means that after bronchodilator the condition of some patients worsened, which is very unlikely, misleading, and probably impossible.

Third, we were unable to find the name of the software they have used for analysis. However, when we analyzed few data mentioned by the authors in their Table 2 using INSTAT software (GraphPad Prism Software Inc., La Jolla, USA) and used both Pearson's Chi-square test with Yate's continuity correction and Fisher's exact test with two-tailed P value (in 2×2 contingency table), it was found that the P values mentioned were either not reproducible or incorrect. As for example - the number of ER visits - P mentioned in the Table 2 is 0.04, but it came as 0.757 (Chi-square) and 0.684 (Fisher's exact test); ankle edema P mentioned <0.05 but it came as 0.705 (Chi-square) and 0.67 (Fisher's exact test) and so on. This is important with context to the point that both these features come out to be insignificant while the authors have mentioned them as significant predictors in conclusion. Further, clinical trials need to confirm these results.

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Conflicts of interest
There are no conflicts of interest.

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