Reviewer’s report

Title: Characterization of Pseudomonas aeruginosa isolates in severe Chronic Obstructive Pulmonary Disease: the role of bronchiectasis

Version: 3
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Reviewer: Miguel Angel A Martinez-Garcia

Reviewer's report:

Major Comments

1. The exclusion criteria included patients with prior bronchiectasis. Could this be a bias considered COPD as a primary diagnosis?. If the authors included patients with severe COPD, I am sure that some of them had previous TCAR with bronchiectasis and then they were excluded from the study. I think that this situation biased the study

2. Why the use of macrolides is a exclusion criteria?. I think this is another bias. Severe COPD patients using macrolides probably have more probability of having an isolation by PA and bronchiectasis

3. Quantitative measure of CFU?

4. Were the patients trained to go to the medical consult when they experience an exacerbation?

5. Multivariate analysis should be better defined in the statistical section in terms of included variables and adjusted variables. Why do you use enter method?. I think a table with the results of this analysis should be added to the paper

6. Are there differences between patients with isolation of PA in the previous year, during the exacerbation and during the follow-up?

7. How many patients without sputum samples? ¿What is the median of sputa per patient?,

8. The authors think that those patients with an unique isolation in the previous year with PA eradication should be included in the PA group?

9. Was there multicollineality between the independent variables in the logistic regression?. For example between the presence of bronchiectasis and the number of antibiotics?

10. I think this study can “suggest” but never “demonstrated” (see conclusions)

Minor Comments

1. Title. Why the role of bronchiectasis and not the role of previous antibiotics?. I think that “the role of bronchiectasis“ should be removed from the title

2. I think that the isolation percentage of P aeruginosa in the studied sample is very high (40%)
3. Have chronic colonization and chronic infection the same definition in the opinion of the authors?

4. Antibiotic treatment was prescribed in accordance with their hospital clinical practice guidelines. Are these guidelines different from the national or international guidelines?

5. Please check the names of MPP

Other Comments

Gallego et al have performed a study to investigate the presence and risk factors for unique or multiple isolations of P. aeruginosa in a sample of severe COPD patients as well as to characterized P. aeruginosa isolates by electrophoresis. The study is well-written and addresses an important topic since P. aeruginosa is a virulent microorganism isolated from COPD due to both the presence of bronchiectasis and the use of previous antibiotics. This is the conclusion of this study although only the use of previous antibiotics appear in the multivariate analysis as an independent predictor of the isolation of PA in the included patients.

1. I think some scores such as Bhalla score would be desirable to better characterized the severity of bronchiectasis

2. I think the authors should stated if they think that a HRCT scan should be performed in all severe COPD patients with or without exacerbations or in those patients with multiple antibiotic use in accordance with their results. Do the authors think that in the clinical practice it is important to perform some microbiological sputum analysis during the exacerbations in severe COPD patients?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

No conflict of interest