Reviewer's report

Title: RISK FACTORS FOR MULTIDRUG-RESISTANT PATHOGENS IN BRONCHIECTASIS EXACERBATIONS

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Reviewer: Sithembiso Velaphi

Reviewer's report:

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Summary of the article from my understanding: This is a descriptive study with its objective being to determine risk factors associated with isolation of multi-drug resistant organisms (MDRO) in adults with non-cystic fibrosis bronchiectasis. A total of 233 patients were included in the study of which 159 had an organism isolated from the sputum or specimen sent. Of the 159 patients 32 grew multi-drug resistant organisms. Patients with multi-drug resistant organisms were more likely to require hospitalization. The risk factors associated with growing multi-drug resistant organisms were having renal disease, prior multi-drug resistant organism isolation and hospitalization previous year.

My Comments:

Abstract: Under results, the statement that MDRO were more frequent in hospitalized patients give impression that the specimens were taken in patients who were hospitalized already, yet it was not the case, rather those who had MDRO were more likely to require hospitalization. They must rephrase the sentence. They must put a p-value next to percentages comparing hospitalization rates. I suppose they meant Enterobactericeae when they used the word Enterobacteria- please recheck. They must include confidence intervals next to the Odds ratios.

Methods: My understanding is that they included first exacerbations, suggesting that they included patients who never had bronchiectasis exacerbations before. They need to describe what they meant by first, because when they present the results they include patients with previous hospitalizations which is not clear whether the hospitalizations were related to bronchiectasis.
exacerbations or not. Because if they were then they cannot say the patient had first exacerbation. Therefore they need to describe what they meant by first or if first is what I understand they meant then should exclude patients with previous bronchiectasis exacerbations.

Results: The authors state that there were 32 patients with MDRO which was 20.1% of 159 patients with microorganisms isolated, and but they also state that the 32 MDRO accounted for 20.1% of microorganisms isolated which is not correct as there were 241 microorganisms isolated according to Table 2 and therefore 32/241 is not 20.1% - they need to correct the statement in the first sentence under microbiological results. And number of MDRO listed is 31 not 32. They must state as to which other bacteria other than MRSA and Pseudomonas were MDR and which Enterobactericeae were MDR. What does the superscript 'a' in Table 2 next to MDR denote as it is not explained at the top or bottom of the Table?

The first sentence under the sub-heading Follow-up is difficult to understand - what are the numbers in parenthesis represent especially the numerators, as the totals 153 and 73 have not been explained or mentioned before.

In Table 4- they should include all the other variables that were included in the multivariate analysis even though they were not significant so that the readers can see what was included and what were the odds ratios or p-values.

In Figure 1- the last blocks must be changed to 'Required or Not Requiring Hospitalizations' because as they stand now, it appears as if the specimens were taken from patients who were in hospital and those who were outpatients which is not my understanding, as all patients were coming in with new exacerbations therefore could not have been hospitalized already.

Under discussion: In their conclusion to also relate to the main objectives of the study, regarding risk factors.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
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Yes

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