Peer Review File

Article information: https://dx.doi.org/10.21037/jtd-2025-1139

Reviewer A

The authors conducted a retrospective analysis comparing patients with bronchiectasis with and without pulmonary aspergillosis. The study is fluent and well written. However, its contribution to advancing our understanding of either bronchiectasis or pulmonary aspergillosis appears very limited.

Reply: Thank you for your positive feedback on our manuscript's fluency and clarity. We also take your comment regarding the study's contribution to advancing understanding of bronchiectasis and pulmonary aspergillosis (PA) very seriously, and we would like to elaborate on the study's core value based on its key findings.

Notably, *Aspergillus* distribution and pulmonary aspergillosis (PA) incidence vary by region—and diagnosing aspergillosis in bronchiectasis patients poses considerable clinical challenges, further hindering the accumulation of robust evidence. Against this backdrop, our retrospective analysis focused on exploring the clinical significance of Aspergillus spp. and aspergillosis in a bronchiectasis cohort from our region.
In our study, *Aspergillus* spp. was isolated from sputum, bronchoalveolar lavage fluid (BALF), or pulmonary biopsy in 68 patients, with 62 ultimately diagnosed with PA. Crucially, compared with bronchiectasis patients without PA, those with PA had a significantly poorer overall prognosis, including higher in-hospital mortality, more frequent hospitalizations within 6–12 months post-discharge, and elevated 1-year post-discharge mortality. **These findings highlight the urgent need for PA screening in bronchiectasis patients, as early detection may facilitate timely antifungal intervention and improve patient prognosis.**
Additionally, our analysis identified two independent risk factors for PA development in this bronchiectasis cohort: the presence of cavities on chest high-resolution computed tomography (HRCT) and a previous history of pulmonary tuberculosis. **These insights provide clinically relevant markers that may help physicians stratify risk and prioritize screening efforts in this vulnerable population.**

Reviewer B

1. In this study, did the authors use β-D glucan and Aspergillus IgG antibody? It is recommended in the guidelines and it seems to be effective for screening PA groups as well. At the same time, I think it could be also useful for screening that the patients with PA mistakenly were classified to patients without PA.

Reply: Thank you very much for your valuable comment. We fully agree that β-D-glucan and *Aspergillus* IgG antibody testing can provide important information for the diagnosis of pulmonary aspergillosis (PA), which aligns with relevant clinical practice guidelines.
Regarding the application of these two tests in our study, the specific situation is as

follows: Not all patients in the PA group underwent β-D-glucan and *Aspergillus* IgG antibody screening. This is because some patients in this group had already obtained a clear diagnosis of PA through other evidence, such as positive *Aspergillus* culture results or pathological examination findings, which met the diagnostic criteria for PA without the need for additional antibody or β-D-glucan testing.
In contrast, all patients in the non-PA group completed both β-D-glucan and *Aspergillus* IgG antibody screening to further exclude the possibility of PA. Additionally; to minimize the risk of misclassifying patients, all enrolled patients were followed up twice during the study period, with repeated evaluations of their clinical data and test results to ensure the accuracy of group classification.

2. Four patients underwent lobectomy in this study. What did authors think of BAE for the patients?

Reply: We appreciate this insightful suggestion. Bronchial artery embolization (BAE) is indeed an important therapeutic option for hemoptysis in patients with pulmonary aspergillosis, especially for those who are not surgical candidates. In our cohort, the patients who underwent lobectomy were selected because that their pulmonary aspergillosis presented with severe localized lung destruction, and prior medical treatment (e.g., antifungal therapy) had shown poor efficacy in controlling their condition. Given the localized nature of their lesions and confirmed surgical feasibility, lobectomy was determined to be a more appropriate intervention to address the underlying pathological changes and achieve better long-term outcomes.

3. How do the authors think about the possibility that differences in patient backgrounds between the two groups, which were statistically significant at several points, may have affected life expectancy?

Reply: Thank you for highlighting this important issue. We fully recognize that statistically significant baseline differences in patient characteristics between the two groups may affect the assessment of life expectancy.
To mitigate this impact, we first identified the patient background variables with significant inter-group differences and incorporated these key variables into our multivariate regression analyses to adjust for their potential influence on prognosis. However, we also need to acknowledge that due to the limited number of cases in our study, a small subset of variables could not be included in the multivariate model.
Additionally, given the retrospective nature of our study, residual confounding from unmeasured or unrecorded variables cannot be fully excluded. We have explicitly clarified these details in the revised manuscript and emphasized them as important limitations of our research. P12 line280-285