Introduction: We have previously shown that bronchiectasis is associated with a high frequency of Aspergillus sensitization (Mac Aogán et al AJRCCM 2019) however the role and risk of ABPA in BCO has not been studied. We aim to investigate the clinical occurrence and outcomes of ABPA in patients with BCO. Methods: N=306 patients with stable bronchiectasis and BCO were prospectively recruited in Singapore, Malaysia and Dundee, UK. Serum Aspergillus-specific IgE and IgG (slgE and slgG) antibodies were evaluated for Aspergillus fumigatus and Aspergillus terreus to determine serological occurrence of ABPA (sABPA) and its associated clinical outcomes. Results: Mean patient age was 66 ±12 years with equal gender distribution. Mean post-bronchodilator FEV$_1$ was 72.4± 24.3% predicted with a mean bronchiectasis severity index (BSI) of 9.4 ±4.1. The prevalence of sABPA and BCO was 13.7% (n=42) and 15.4% (n=47) respectively. On multivariate analysis, sABPA was associated with a high odds ratio (OR) of BCO (OR= 7.16; 95%CI 1.38-37.19, p=0.019). The presence of sABPA in BCO was associated with increased exacerbation frequency (p=0.003) and greater bronchiectasis severity (p=0.007). Conclusion: ABPA in bronchiectasis has a risk of occurring with BCO and confers poorer clinical outcome. Early identification of these patients at highest risk may facilitate early intervention and prevent disease progression. Funding: This research is supported by the Singapore Ministry of Health’s National Medical Research Council under its Transition Award (NMRC/TA/0048/2016) (S.H.C), a Clinician-Scientist Individual Research Grant (MOH-000141) (S.H.C) and a Research Training Fellowship (NMRC/Fellowship/0049/2017) (P.Y.T); the Singapore Ministry of Education under its Singapore Ministry of Education Academic Research Fund Tier 1 (2016-T1-001-050) (S.H.C); the NTU Integrated Medical, Biological and Environmental Life Sciences (NIMBELS), Nanyang Technological University, Singapore [NIM/03/2018] (S.H.C) and the Ageing Research Institute for Society and Education (ARISE), Nanyang Technological University, Singapore [ARISE/2017/6].

This abstract is funded by: This research is supported by the Singapore Ministry of Health’s National Medical Research Council under its Transition Award (NMRC/TA/0048/2016) (S.H.C), a Clinician-Scientist Individual Research Grant (MOH-000141) (S.H.C) and a Research Training Fellowship (NMRC/Fellowship/0049/2017) (P.Y.T); the Singapore Ministry of Education under its
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