

Asthma and bronchiectasis exacerbation

Bei Mao^{1,2,3}, Jia-Wei Yang^{1,2,3}, Hai-Wen Lu¹ and Jin-Fu Xu^{1,2}

Affiliations:

1Dept of Respiratory and Critical Care Medicine, Shanghai Pulmonary Hospital, Tongji University School of Medicine, Shanghai, China.

2Dept of Medicine, Soochow University, Suzhou, China.

3Both authors contributed equally.

Correspondence:

Jin-Fu Xu, Dept of Respiratory and Critical Care Medicine, Shanghai Pulmonary Hospital, No. 507 Zhengmin Road, Shanghai, 200433, China. E-mail: jfxucn@gmail.com

ABSTRACT Bronchiectasis and asthma are common respiratory diseases worldwide. However, the influence of asthma on bronchiectasis remains unclear. The objective of this study is to analyse the effects of asthma on bronchiectasis exacerbation. Data from inpatients diagnosed with bronchiectasis with or without asthma at Shanghai Pulmonary Hospital (Shanghai, China) between January 2013 and December 2014 were retrospectively collected and analysed. 249 patients with only bronchiectasis and 214 patients with both bronchiectasis and asthma were included in the study. Follow-up records were used to evaluate the effect of asthma on bronchiectasis exacerbation. The variables found to be independently associated with bronchiectasis exacerbations were age (OR 1.07, 95% CI 1.03–1.11; $p < 0.001$), duration of symptoms (OR 1.06, 95% CI 1.03–1.09; $p < 0.001$), the presence of asthma (OR 2.6, 95% CI 1.15–5.88; $p = 0.021$), forced expiratory volume in 1 s $< 50\%$ predicted (OR 4.03, 95% CI 1.75–9.26; $p = 0.001$), isolation of *Pseudomonas aeruginosa* in sputum (OR 2.41, 95% CI 1.00–5.79; $p = 0.05$) and lung lesion extension to more than two lobes (OR 2.73, 95% CI 1.16–6.45; $p = 0.022$). The existence of asthma was associated with an independent increase in risk of bronchiectasis exacerbation.