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New aspects of fundamental pathology and environmental control: Important issues in allergic bronchopulmonary mycosis

To the Editor:

We read with interest the paper by Okada et al in a recent issue of *J Allergy Clin Immunol Pract*.[1] This case report of allergic bronchopulmonary mycosis (ABPM) suggested the importance of identifying and controlling environmental antigen exposure, but we have some questions.

The fundamental pathology of allergic bronchopulmonary aspergillosis is recognized as an eosinophilic mucus plug.[2] Applied to ABPM caused by *Schizophyllum commune*, the acute clinical manifestations would be difficult to explain. Based on our previous data using bronchoprovocation examination of *S. commune* crude antigens and environmental exposure, the essential condition underlying this disease is not the mucus plug itself, which would be produced subsequently, but eosinophilic airway inflammation, which spreads from the bronchi to alveoli evoked by inhaled antigens.[3]

Although an inflammatory reaction occurs at the time of acute exacerbation, a mucus plug would not be formed suddenly. In this case, did the authors immediately notice mucus plug formation at the next onset occurring 9 months after the first episode? Did the reported patient have a fever immediately after discharge from the first hospitalization?

On the basis of the basic pathophysiology of ABPM associated with *S. commune*, we proposed the following 4 treatment methods previously:[3]

1. Removal of fungi from the airway with antifungal drugs
2. Inhaled or oral steroids for eosinophilic bronchitis caused by fungal colonization
3. Bronchoscopic suctioning of mucus plugs
4. Environmental management from the perspective of *S. commune* ecology.

In this case, it was emphasized that improvement of symptoms was achieved by only environmental management without drug therapy. Cleaning at the time of examination with bronchoscopy might be a potent treatment leading to symptom improvement.

It is described that fungal culture of the air conditioner filter was not performed, but the presence of *S. commune* remaining in the indoor environment can be investigated, even after the air conditioner has been removed. *S. commune* and *Aspergillus fumigatus* are included in the same filamentous fungus group. However, *A. fumigatus* is commonly detected on the filters of air conditioning systems, whereas *S. commune* is usually not detected. If accurate knowledge of the ecology of the *S. commune* is provided, the patient would not have to quit his job around air conditioning systems.

Further discussion and sharing of clinical practice regarding this case will be useful for establishing the pathophysiology and disease management of ABPM.

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Reply to "New aspects of fundamental pathology and environmental control: Important issues in allergic bronchopulmonary mycosis"

To the Editor:

Ohkura et al[1] offered interesting insights and raised several questions in their correspondence regarding our report on a case with repeated exacerbation by environmental exposure and spontaneous resolution of allergic bronchopulmonary mycosis (ABPM).[2]

First, they raised the question of how quickly mucus plugs can be formed during acute exacerbation of ABPM. We could not demonstrate direct evidence that mucus plug formation occurred during the acute episode in the present case due to the lack of radiographic data before the first visit to our hospital. There have been no studies examining the time required for mucus plug formation after allergen exposure in ABPM. The history of transient exposure to a moldy air conditioner, acute symptoms including high fever and elevated serum C-reactive protein levels in the presented case suggested that the patient was exposed to higher levels of fungal allergen than usual for ABPM cases or