

LETTER

# Diagnosis of invasive bronchial-pulmonary aspergillosis in patients with chronic obstructive respiratory diseases

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See related research by He *et al.*, <http://ccforum.com/content/15/1/R5>

In the previous issue of *Critical Care*, we read with interest the article by He and colleagues [1] on invasive bronchial-pulmonary aspergillosis (IBPA) in critically ill patients with chronic obstructive respiratory diseases (CORDs).

In this prospective study, the authors, contrary to their statement, did not follow the case definitions for 'probable' invasive pulmonary aspergillosis (IPA) as defined by the consensus of the European Organization for Research and Treatment of Cancer and the National Institute of Allergy and Infectious Diseases Mycoses Study Group (EORTC/MSG) [2]. Indeed, EORTC/MSG criteria for probable IPA require that all three of the following concomitant conditions be fulfilled: presence of a host

factor, presence of a clinical criterion, and presence of a mycological criterion. In the study group with IBPA, at least two patients (patients 4 and 13) did not fulfill these criteria and thus were erroneously incorporated in the case group. Furthermore, only 4 patients (out of 13) had histologically proven invasive bronchial aspergillosis, and many patients thus may have been erroneously classified in the IBPA group since no autopsy was performed.

Considering the low number of patients with IBPA as well as the misclassification of some of them, we feel that providing independent variables predicting IBPA (with further extrapolation of a diagnostic algorithm) in critically ill patients with CORD is irrelevant.

## Authors' response

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We thank Bulpa and Dive for their comments. We agree that some cases in our study did not strictly fulfill the EORTC/MSG diagnostic criteria, mainly for a lack of host factors. However, the EORTC/MSG criteria for IPA were developed for patients with malignant disease and recipients of allogeneic hematopoietic stem cell and solid-organ transplants [2]. Owing to the absence of data, the criteria do not apply to non-cancer populations. In 2007, Bulpa and colleagues [3] relied on several case reports to propose their definitions of IPA, specifically for chronic obstructive pulmonary disease patients and isolation of *Aspergillus*. The diagnoses for 36 patients (64%) were classified as proven in their study, and this circumstance confirmed the validity of their criteria. As a result, their criteria may be more appropriate for IPA in future studies with the CORD population.

We agree that additional proven cases are needed to avoid the misclassification of some patients with IBPA. However, invasive procedures such as transbronchial biopsies are rarely performed in late-stage critically ill patients with CORD, and this dramatically limits the possibility of collecting histological evidence of IPA. In a recent study with the largest series of IPA in patients with chronic obstructive pulmonary disease, none of the 53 cases had a lung biopsy [4]. The biopsy of bronchial mucous is less invasive and may give evidence of trachea-bronchial invasion with *Aspergillus*. Therefore, we prefer to do bronchial mucous biopsy rather than transbronchial lung biopsy under bronchoscopy for an early diagnosis of IBPA in patients with CORD.

## Abbreviations

CORD, chronic obstructive respiratory disease; EORTC/MSG, European Organization for Research and Treatment of Cancer/National Institute of Allergy and Infectious Diseases Mycoses Study Group; IBPA, invasive bronchial-pulmonary aspergillosis; IPA, invasive pulmonary aspergillosis.

## Competing interests

The authors declare that they have no competing interests.

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Published: 27 April 2011

#### References

1. He H, Ding L, Li F, Zhan Q: **Clinical features of invasive bronchial-pulmonary aspergillosis in critically ill patients with chronic obstructive respiratory diseases: a prospective study.** *Crit Care* 2011, **15**:R5.
2. De Pauw B, Walsh TJ, Donnelly JP, Stevens DA, Edwards JE, Calandra T, Pappas PG, Maertens J, Lortholary O, Kauffman CA, Denning DW, Patterson TF, Maschmeyer G, Bille J, Dismukes WE, Herbrecht R, Hope WW, Kibbler CC, Kullberg BJ, Marr KA, Muñoz P, Odds FC, Perfect JR, Restrepo A, Ruhnke M, Segal BH, Sobel JD, Sorrell TC, Viscoli C, Wingard JR, *et al.*: **Revised definitions of invasive fungal disease from the European Organization for Research and Treatment of Cancer/Invasive Fungal Infections Cooperative Group and the National Institute of Allergy and Infectious Diseases Mycoses**

**Study Group (EORTC/MSG) Consensus Group.** *Clin Infect Dis* 2008, **46**:1813-1821.

3. Bulpa P, Dive A, Sibille Y: **Invasive pulmonary aspergillosis in patients with chronic obstructive pulmonary disease.** *Eur Respir J* 2007, **30**:782-800.
4. Guinea J, Torres-Narbona M, Gijón P, Muñoz P, Pozo F, Peláez T, de Miguel J, Bouza E: **Pulmonary aspergillosis in patients with chronic obstructive pulmonary disease: incidence, risk factors, and outcome.** *Clin Microbiol Infect* 2010, **16**:870-877.

doi:10.1186/cc10138

**Cite this article as:** Bulpa P, Dive A: **Diagnosis of invasive bronchial-pulmonary aspergillosis in patients with chronic obstructive respiratory diseases.** *Critical Care* 2011, **15**:420.