Reviewer's report

Title: Concurrent Pulmonary Mucormycosis and Mycobacterium tuberculosis infection

Version: 2 Date: 31 January 2007

Reviewer: Margaret R Hammerschlag

I am familiar with the literature and believe that this case meets one of the 7 criteria for evaluation in the journal: An unexpected association between diseases or symptoms

Has the case been reported coherently?: No

Is the case report authentic?: Yes

Is this case worth reporting?: No

Does the case report have explanatory value?: No

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: No

Comments to authors:

General

The authors are presenting an interesting case of pulmonary mucormycosis and concurrent tuberculosis infection in a patient with no identified risk factors.

The manuscript lacks some useful information for the case.

1. It does not mention some of the risk factors associated with these infections even if the patient has none of them. The authors did not mention the HIV status of the patient (mucormycosis has been reported in AIDS patients), his past PPD status, exposure history, his travel history and possible risk factors associated with his severe ischemic heart disease such as diabetes. Were all the risk factors ruled out? If so, we would like to know how.

2. Mucormycosis infection has been reported in a patient with no “apparent” risk factors. The authors did not cite couple of cases of pulmonary mucormycosis in normal hosts. One case of solitary pulmonary nodule caused by phycomycosis in a patient without obvious predisposing factors was published in 1980 in Thorax (1) and one case of isolated pulmonary mucormycosis in an apparently normal host was published in 1995 in journal of national medical association (2). Other forms of mucormycosis infection have occurred in children. A case of isolated hepatic mucormycosis in an immunocompetent child was published in the American Journal of Gastroenterology (3) in 1996. (Please see references at the end of this section).

The authors referred to 2 cases of concurrent TB and mucormycosis (references 6 and 7), which were published in Japanese literature.

2. On the section of making the diagnosis, the appropriate tests were used. Was the team able to grow the fungus? Would it be possible to see the histology slide instead of the bronchoscopy picture?

3. On the other hand the management of the patient did not follow the standard guidelines for treatment of mucormycosis for the oral treatment part. It is not acceptable to state that voriconazole is the antifungal of choice to treat this infection. In fact some patients developed mucormycosis infection while on voriconazole (4). It is very well known that azoles have no activity against mucormycosis with the exception of the newly introduced posaconazole that seems to be promising. The use of inappropriate treatment for such a serious (deadly) infection in a patient who had a good outcome put in question the accuracy of the diagnosis and does not add any teaching points to the manuscript. The patient could have had a response to TB treatment with symptoms resolution (assuming it was sensitive) but not to mucormycosis treatment.

Overall, it is a well-written case discussing 2 concurrent infections in an unusual combination. The history is missing some useful information and the management of the patient described as aggressive was inappropriate.


To summarize the elements mentioned in the previous sections, authors need to document (include or exclude) the risk factors associated with this disease.

- Please provide the following information if possible:
  - Patient HIV status, travel/exposure history, HbA1c level.
  - Is it possible to add the histology slide?
- Delete the following statement in page 3 line 17-18: “The use of voriconazole, the anti-fungal agent of choice, was precluded due to its interaction with rifampicin”.
- Page 3 lines 19-20-21 is confusing, needs to be explained clearly i.e. what were the concerns?
- Page 4 lines 21-22-23 are irrelevant to this case. “While sputum cultures are often negative, BAL is more sensitive and can be helpful, in patients with haematological disorders where biopsies are contraindicated due to the presence of thrombocytopaenia”.
- In the treatment section page 5 lines 1-2, add the appropriate medical treatment as a teaching point.

What next?: Revise and resubmit

Quality of written English: Needs some language corrections before being published