Author's response to reviews

Title: Semi-invasive aspergillosis in an immunocompetent patient with Swyer-James-MacLeod Syndrome: a case report

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We thank you for your comments and reviews and we would like to clarify your questions:

1. Question (Q): Discussion of the problems of the SJMS population.
   Answer (A): SJMS’s manifestations may vary from asymptomatic forms, in which the diagnosis follows a radiological finding, to recurrent respiratory infections, with productive cough, wheezing and occasionally haemoptysis. SJMS has also some common features with CPOD, namely the existence of emphysema bullae, airflow obstruction, distal air trapping and predisposition to respiratory infections. (It has been added to the main text).

2. Q: How to explain Aspergillus immune reaction results?
   A: Serological tests are adjuncts and good methods to support or exclude the diagnosis in the appropriate clinical context. Nevertheless they do not make a definitive diagnosis.
   The antigen detection method was an imunoenzimatic technique for galactomannan antigen detection (PLATELIATM ASPERGILLUS EIA, from BIO-RAD) with 90 to 100% sensitivity and 85 to 93% specificity. It may detect all Aspergillus species, as galactomannan is a constituent of the wall of Aspergillus gender.
   As it is a lung infection, the antigen level in the serum may be in some cases below the threshold of detection of the test.
   The antibody detection is known to have a limited value.

   A: Itraconazole is a second-line agent for the treatment of aspergillosis, however it is a reasonable drug for immunocompetent patients with non life threatening
forms of aspergillosis, allowing oral treatment. Also it is less expensive than voriconazole and it is more comfortable and easily accessible for the patient as it is available in non-hospital pharmacies. The main limitations of itraconazole are its poor bioavailability and numerous drug interactions with several drugs that activate cytochrome P450. This patient had no concomitant medication that would predict such a problem. Furthermore, voriconazole has also important side-effects and drug interactions.

Finally, there are a few reports of itraconazole resistant Aspergillus fumigatus but none of Aspergillus glaucus resistance.

4. Q: Thus patient’s SJMS increased his occupational risk for aspergillosis?
A: We believe so. It is known that SJMS predisposes patients to lung infections. Also, some similarities with COPD could point out to potential fungal infections. If occupational exposure exists, especially with a potential massive spore inhalation, patients should be advised to use mechanical filter masks and should be clinically monitorized. These infections should be diagnosed and treated as soon as possible.

5. Q: Why such an invasive diagnostic approach given his occupational exposure and the limited antibiotic regimen?
A: The diagnosis of invasive/semi-invasive aspergillosis requires detection of Aspergillus in cultures and/or demonstration of tissue invasion by the fungus in the histological exam. The less invasive techniques did not allow an isolation of the fungus. Furthermore, sputum cultures may be negative and positive cultures have to be interpreted according to the clinical picture, taking in consideration that it can be a colonizing organism of the upper and lower respiratory tract. So, in most cases the diagnosis is made by tissue isolation through invasive methods. Also, the patient had a past smoking history and presented a lung mass, neoplastic disease needed to be excluded.

A: Where made.

A: We reviewed the text and made corrections.