Extended Abstract
Volume 2:2, 2018

Journal of Genetics and DNA Research

Open Access

Invasive pulmonary aspergillosis in an immunocompromised patient: a case report

Jamarkattel Sujan

Internal Medicine at Lincoln Medical Center, New York., E-mail: sujanjamarkattel90@gmail.com

Abstract

We present a case of invasive pulmonary aspergillosis in an immunocompromised patient along with supportive diagnostic results that include serum biomarker assays, computed tomography imaging, and bronchoalveolar lavage fluid analysis. Case Presentation: A 47 years old HIV/AIDS patient, non-compliant to antiretroviral therapy, presented with acute non-specific symptoms of malaise, mild productive cough, and subjective fever with chills without hemoptysis or chest pain. He had recently visited other hospitals prior to this visit and importantly was not diagnosed with Aspergilloma. During this hospitalization, his low grade intermittent fever was resistant to empirical broad spectrum antibiotic therapy. He was noted to have marked immunosuppression with 1 CD4+ lymphocytes/mm and a high viral RNA load. In addition, imaging studies revealed the presence of a thick walled cavitary mass at the right lung apex with centrilobular nodules consistent with aspergilloma, along with patchy ground glass opacities surrounding an alveolar infiltrate and consistent with the “Halo Sign” of invasive aspergillosis. Tuberculosis was ruled out. Serum aspergillus titers were positive. Bronchoscopy with bronchoalveolar lavage revealed dark fluid with suspended black particles and fluid analysis revealed high aspergillus titers. Microbiological cultures grew aspergillus fumigatus. The patient refused antifungal treatment with voriconazole and left against medical advice. Follow up revealed the patient expired two weeks later. Discussion: The initial presentation of invasive aspergillosis, as in this patient, can be subtle and presents diagnostic challenges. Definitive identification requires culture of Aspergillus species from a normally sterile site along with histopathologic demonstration of hyphal tissue invasion. The diagnostic approach in patients with suspicious findings initially involves non-invasive modalities, such as fungal biomarkers, imaging studies and fungal cultures followed by invasive procedures, such as bronchoscopy and biopsy in select cases. Conclusion: Despite advances in antiretroviral treatment, which have dramatically prolonged the survival of these patients, suspicion for aspergillosis in immunocompromised patients presenting with non-specific pulmonary symptoms should remain high, especially considering the risk of high mortality. Clinicians should be alert to the possibility of invasive fungal infections in such high-risk patients and be able to initiate early antifungal therapy for favorable outcomes.

Aspergillosis is the group of diseases caused by the Aspergillus species, which cause a broad spectrum of disease, ranging from hypersensitivity reactions to direct angioinvasion. The major forms of pulmonary aspergillosis range from aspergilloma with a relatively benign course to invasive pulmonary aspergillosis, which is uniformly fatal. Invasive pulmonary aspergillosis more commonly occurs in immunocompromised patients, with a rapidly progressing course leading to death. We report a case of an immunocompetent patient who developed fatal pneumonia secondary to Aspergillus fumigatus.

This work is partly presented at International Conference on STD-AIDS AND INFECTIOUS DISEASES