ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Isolation of Curvularia Lunata from Allergic Bronchopneumonia Patient: Case Report.

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ABSTRACT

A 50 year old male presented in November 2014 with upper respiratory tract infection followed by shortness of breath and a productive cough. He had a past history of allergic rhinitis since childhood exacaberated by housedust and flowers, but no definite history of asthma. In September 2014 he developed a dry unproductive cough with occasional expectoration of yellow to brown plugs of sputum , developed respiratory failure and was intubated with tracheostomy. Bacterial cultures showed Klebsiella pneumonia. But the patient did not respond to antibiotic. Fungal cultures showed curvularia luntana. The fungal infection was added fluconazole 150 mg OD . The patient responded and improved.

Key words: Curvularia lunata, pneumonia, fluconazole

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ISSN: 0975-8585

INTRODUCTION

Pneumonia is the second leading of cause of death in developing countries. Among the vast variety of respiratory pathogens, a small percentage is accounted by fungal pathogens. The human airway is continuously in contact with a nonsterile environment; hence fungal spores have the potential to reach lung tissue. Immunocompromised patients are vulnerable to airborne fungal infection, including those common in the environment that are normally considered nonpathogenic.

The most commonly encountered opportunistic fungal species encountered in immunocompromised patients are Aspergillus spp., Candida Spp. And Chrysoporium spp. But now a days, dematiaceous fungi are emerging fungal infections causing opportunistic fungal pneumonia, which have low inherent virulence. *Curvularia* is a fungus that belongs to a dematiaceous saprophyte commonly found in the soil and plant materials. It rarely causes serious illness in humans. Infection with *Curvularia* spp. includes mycotic keratitis, black piedra and deep tissue infection [1]. *Curvularia* deep tissue infection is being recognized more frequently with case reports of invasive sinusitis with extension into the central nervous system, pneumonia, deep sternal wound infections and endocarditis [1,2]. They manifest has pneumonia, asymptomatic solitary pulmonary nodules, and endobronchial lesions that may cause hemoptysis.

Case Report

A 50 year old male presented in November 2014 with upper respiratory tract infection followed by shortness of breath and a productive cough. He had a past history of allergic rhinitis since childhood exacerbated by housedust and flowers, but no definite history of asthma. In September 2014 he developed a dry unproductive cough with occasional expectoration of yellow to brown plugs of sputum. On admission to the hospital in November 2014, he had coarse inspiratory and fine expiratory wheezes over the right anterior chest. A chest radiograph showed diameter solid opacities at the right hilum . He developed respiratory failure and was intubated with tracheostomy. His BP was 130/80. Sputum culture was done for bacteria. Klebsiella spp was isolated. The patient was treated with azithromycin. But he did not respond to the antibiotics. Later sputum was sent to microbiology lab for fungal culture. Sputum was inoculated on Sabourauds dextrose agar and incubated at 25◦C and 37◦C. In KOH mount, fine septate fungal elements was seen. After one week green to grey fluffy fungal culture growth was seen in both 25◦C and 37◦C (FIGURE 1). The fungus produced many conidia each of which had larger darker central cell typical of the genus Curvularia.

Figure 1: Tube culture showing brown to black colour on the reverse side.

Conidia are pale brown, with three or more transverse septa and are formed apically through a pore in a sympodially elongating geniculate conidiophores. Conidia are cylindrical or slightly curved, with one of the central cells being larger and darker. The fungus was identified as curvularia lunata.

ISSN: 0975-8585

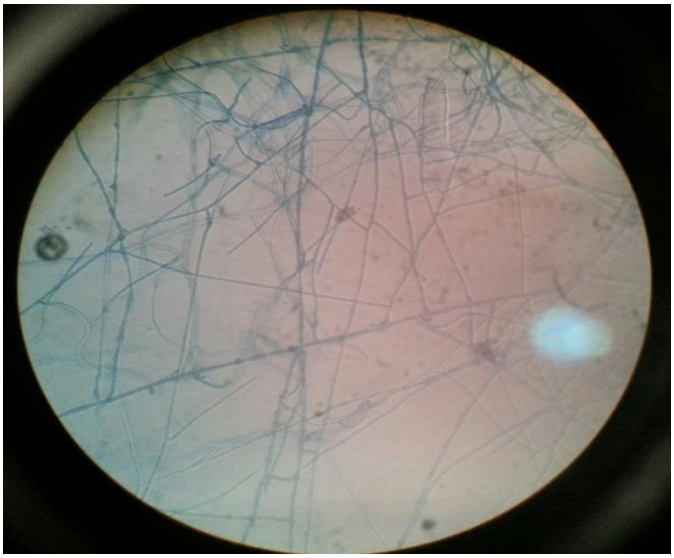

Figure 2: Microscopic observation of brown conidia

And the patient was treated with fluconazole for three weeks and the patient improved and all his parameters were stable.

DISCUSSION

The patient described in this report had raised eosionophil counts with sputum eosinophila caused by the fungi other than aspergillus. Curvularia lunata is a saprobic dematiaceous fungi at resides in soil Ellis 1966 [3]. Rarely this fungi causes human infection they include allergic bronchopneumonia, sinusitis, endocarditis and skin infections and keratitis.In broncho pulmonary involvement these fungi usually occur in allergic conditions as in Allergic bronchopulmonary aspergillosis (ABPA) than appearing as a solitary cause for lung infection [4].

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