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Acrophialophora fusispora: an emerging agent of human mycoses. A report of 3 new clinical cases

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Abstract

Acrophialophora fusispora is a soil-borne fungus, which is emerging as a human pathogen. Only four cases of human infection had been described previously. We describe three more cases, two from Europe and one from India. Since this fungus has been misidentified in several other cases, it is probably more frequent than first thought.

Keywords: *Acrophialophora fusispora*; Human infections; Susceptibility

1. Introduction

Acrophialophora fusispora is a soil fungus unusual in clinical samples (De Hoog et al., 2000). However, it is capable of causing severe human infections. Up to now, only 4 well-documented cases of human infection have been reported. One was a central nervous system infection in a leukemic young girl in Saudi Arabia (Al-Mohsen et al., 2000), and the other 3 were in nonimmunocompromised adults. Two were cases of keratitis, one from India (Shukla, 1983) and the other from the United States (Arthur et al., 2001), and a case of pulmonary infection was also found from the United States (Sutton et al., 1997). In addition, the fungus was isolated in 5 cases of airway colonization in cystic fibrosis patients in France and Spain (Cimon et al., 2005; González-Escalada et al., 2000).

We describe here the 2 first cases of infection by *A. fusispora* in Europe and the second one from India.

2. Case reports

2.1. Case 1

A 55-year-old Indian female agricultural worker presented at the Eye ward, on June 2005, complaining of pain, discharge, watering, redness, and blurring of vision after an injury with a wood chip in her left eye a month and a half before. On examination, the patient had a central corneal ulcer of 7 × 4 mm with grayish white plaque, a thick hypopyon, and presence of infiltration (Fig. 1A). The visual acuity in her right eye was 6/24 unaided and 6/9 aided, and in her left eye, she had only a small perception of light. Corneal scrapings were collected and processed immediately. Specimens were cultured on routine media for bacterial identification and Sabouraud dextrose agar (SDA), with chloramphenicol and gentamicin, for fungal isolation. Gram staining and 10% KOH preparation were made, and some hyphae were observed. Growth of a single fungus on SDA appeared on the fifth day. No growth was seen on other

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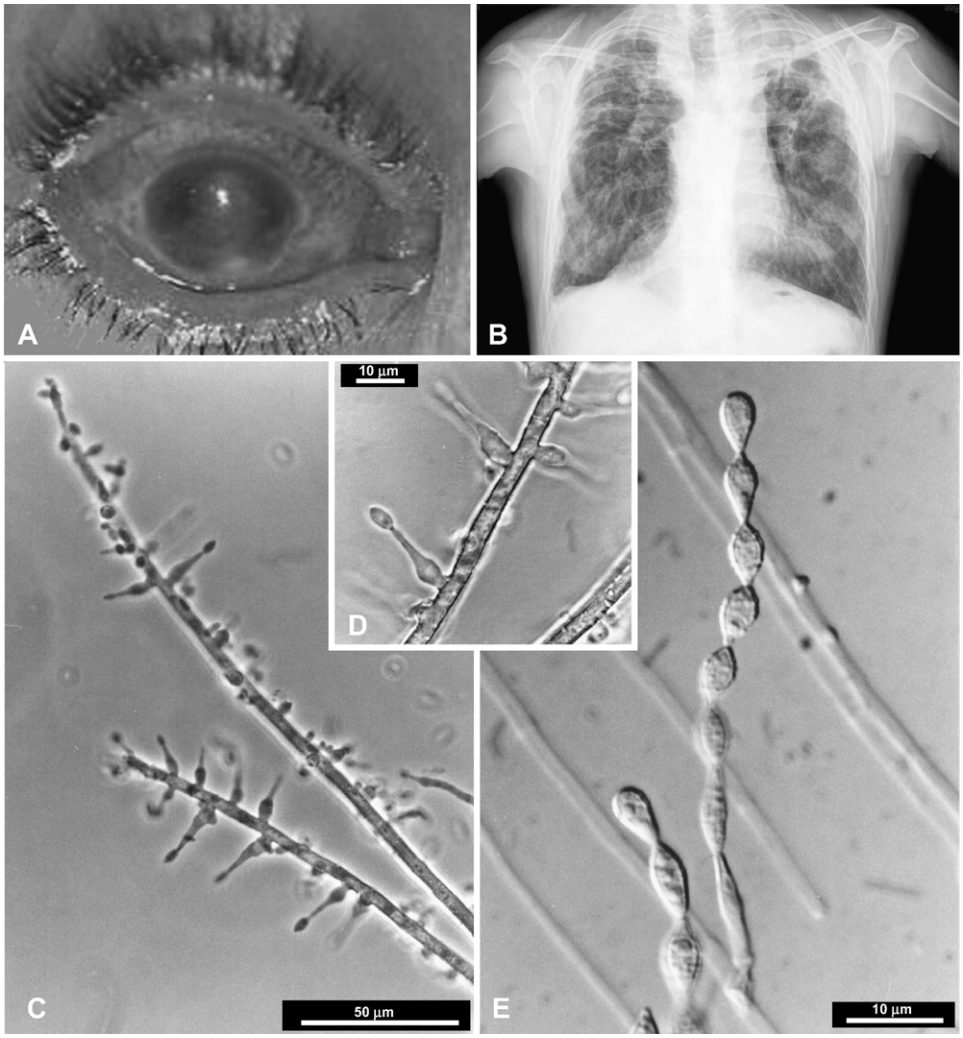

Fig. 1. (A) Keratitis (case 1). (B) Chest X-ray, bilateral interstitial infiltrate (case 2). (C–E) *A. fusispora*, conidiophores, conidiogenous cells, and conidia.

media. Similar findings were observed in scrapings collected 2 days later. The patient was diagnosed with fungal ulcer. Treatment consisted of local eye drops, comprising natamycin and several antibiotic agents, and systemic treatment with fluconazole 150 mg bid and ciprofloxacin 500 mg bid. Because the eye did not improve, a therapeutic keratoplasty was done on June 27, 2005, and the same treatment as before was administered until she was discharged. The patient was advised to attend the Eye outpatient Department for follow-up, but she did not turn up.

2.2. Case 2

A 33-year-old Portuguese male with bronchiectasis after measles, with progressive impairment of lung function, underwent a bilateral lung transplantation in March 2002 in Spain, and immunosuppressive therapy was initiated. Two years later, the patient developed transplant rejection, and corticosteroids were added to the treatment. In April 2005, he was required rehospitalization because of severe dyspnea, fever, leukocytosis, C-reactive protein elevation, hypoxemia, and bilateral interstitial infiltrate on the chest X-ray (Fig. 1B). A broad-spectrum antibiotic therapy was initiated but to no clinical benefit. A single fungus was isolated from several sputum and bronchoalveolar lavage (BAL) samples in routine mycological culture media. Oral treatment with voriconazole (VRC) (200 mg bid) was started, and immunosuppressive therapy was partially decreased. One month later, a marked clinical improvement with leukocytosis and C-reactive protein normalization was noted. Cultures of BAL were negative for fungi. After follow-up at 8 months, the patient continued with moderate respiratory functional limitation and negative mycological cultures of BAL samples.

2.3. Case 3

A 67-year-old Spanish male with pulmonary fibrosis and bullous emphysema underwent a transplantation of