

*Rhizomucor pusillus*, diagnosed by PCR-sequencing of fungal rDNA performed on fresh ball specimen.

**Case report:** A 38 years-old-Caucasian woman was followed for positional dizziness and headaches. Ear and sinus computed tomographic was realized, showing fortuitously an isolated heterogeneous opacity, filling the left maxillary sinus with a tooth foreign body. She described neither nose disorders (as obstruction, or rhinorea), nor sinus pain or fever episodes. No immunodeficiency or diabetes mellitus was reported. A endonasal endoscopic surgical treatment was undertaken with a head middle turbinectomy and a middle left meatotomy. The examination of the sinus showed purulent secretion and a fungus ball. The fungus ball was removed and biopsy of the sinus mucous was performed. The sinus was washed with physiological serum and an Albertini drain was let in place. Microscopical direct examination of the fungus ball showed broad, hyaline, wide-angled branching, pauciseptate irregular fungal hyphae and dehiscent sporangia, without apophyse. PCR-sequencing of D1 – D2 region of large subunit rDNA performed on fresh ball specimen culture revealed a 100% homology with *Rhizomucor pusillus*. Culture on Sabouraud and Czapeck agar remained negative. The histology found an inflammatory recasting mucous but no fungal invasion of mucosa. No antifungal agent was given and post-operative survey did not show any disorders, with endonasal secretions at day 23 negative for fungi by direct examination and culture. Patient did not present precipitins against *Rhizomucor pusillus* (only one arc with electrosyneresis). Biochemical analysis of ball using atomic absorption spectrometry revealed high concentration of zinc in ball (1.4% w/w).

**Conclusion:** Paranasal sinus fungus ball due to Mucorales are very uncommon. Antifungal agents are not required for management of patient, in absence of invasion of sinus mucosa. rDNA PCR-sequencing proved to be a highly sensitive and rapid method to identify etiology of culture-negative sinus fungus ball. High levels of zinc determined in ball proved the role of tooth foreign body (zinc eugenate) in pathogenesis of this maxillary fungus ball.

### P316

#### Prevalence of tinea pedis in top athletes from Cuba

T. M. Iglesias-Hernández<sup>1</sup>, G. F. Martínez-Machín<sup>2</sup>, M. R. Perurena-Lancha<sup>2</sup>, W. Carvajal-Veitia<sup>1</sup>, M. Brito-Gallosó<sup>3</sup>, I. Curfs-Breuker<sup>4</sup>, J. F. Meis<sup>4</sup> and M.T. Illnait-Zaragozi<sup>2</sup>  
<sup>1</sup>National Sports-Medicine Institute, Havana, Cuba, <sup>2</sup>Instituto Pedro Kouri, Havana, Cuba, <sup>3</sup>Enrique Cabrera Hospital, Havana, Cuba, <sup>4</sup>Canisius Wilhelmina Hospital, Nijmegen, The Netherlands

**Background:** Tinea pedis is by far the most common fungal disease of man. Because its high frequency, a prevalence study of this pathology in high-performance athletes from Cuba was studied.

**Method:** A total of 411 sequential subjects from 30 sport disciplines of The National School for Athletes, Havana, Cuba were included. Clinical data and skin scrapings (feet's free borders, soles and interdigital region) were collected. All the specimens were examined with KOH 20% and cultured on Sabouraud dextrose agar. Positive cultures were identified by conventional techniques. One hundred-thirty skin samples were additionally microscopically examined with blankophor fluorescent staining.

**Results:** The presence of fungal-like structures was detected in 34.5% when samples were examined with KOH vs 37.7% when it was done with blankophor. Culture was positive from 69 scrapings (16.8%) and the identified species were *Trichophyton rubrum* (65.2%), *Trichophyton mentagrophytes* (15.9%), *Epidermophyton floccosum* (7.2%), *Candida albicans*, *Candida krusei*, *Candida lusitanae*, (2.9% each one), *Rhodotorula* sp. and *Trichosporon beigelii* (1.4% each one). Cases with signs and symptoms and/or positive direct examination when culture was negative were considered as positive (29.4%). Cases without clinical symptoms and signs but with positive culture, independently of direct examination results, were considered as carriers (5.7%). Agreement among all the criteria was achieved in 50 cases (12.1%). Athletics and rowing were the sports with highest prevalence of tinea pedis (6% each).

**Conclusions:** The prevalence of tinea pedis in Cuban top athletes is similar to those reported worldwide. Microscopy with blankophor provides a more sensitive screening method. Isolation and identification of the fungal agent is required for the diagnosis of dermatophytosis.

### P321

#### Rhinocerebral mucormycosis as the first presentation of diabetes mellitus in a 48 year-old-woman

F. Abbasi, M. Aghahasani, K. A. Sarhangipour and S. K. Fardkhani  
*Shaheed Beheshti Medical University, Tehran, Iran*

**Background:** Rhinocerebral mucormycosis is a devastating, rapidly progressive and often fatal opportunistic fungal infection predominantly affecting individuals with underlying metabolic or immunological compromise.

**Patients:** We presented a case of rhinocerebral mucormycosis as first presentation of diabetes mellitus. She had negative history of DM, presented with coryza, erythema and swelling of left periorbital area 1 week before admission. Symptoms progressed quickly and she developed ptosis and chemosis and epistaxis. Paranasal CT scan showed destruction of left and right maxillary sinuses with extension to other sinuses, nose, orbit and base of skull. Operation was done. Orbital exenteration, debridement of intranasal mucus membrane and necrotic tissue was done. Despite extensive surgical debridement and medical therapy the patient expired.

**Conclusion:** The diagnosis of rhinocerebral mucormycosis should be considered in the clinical setting of necrotic sinusitis and acute neurologic deficit in diabetic patients. Early diagnosis and treatment are crucial factors leading to a good outcome.

**Keywords:** Mucormycosis, rhinocerebral, amphotericin-B, diabetes mellitus.

### P322

#### Experimental systemic cryptococcosis in immunocompetent animal model (BALB/c) and immunodeficient (BALB /c-SCID): treatment with amphotericin B and fluconazole

E. G. da Silva, S. de Souza, C. Viani, G.C.M. Batista, V. K. Perinazzo, R. A. Prates, M. S. Ribeiro and C. R. Paula  
*IPEN, São Paulo, Brazil*

**Background:** Cryptococcosis is a disseminated fungal disease that occurs mainly in immunocompromised individuals, characterized by high mortality rates. This disease is caused by the yeast *Cryptococcus neoformans*. Systemic spread from a primary focus of cryptococcal infection commonly involves the central nervous system, manifested as meningitis or meningoencephalitis. The treatment of most infections is based on results of the sensitivity *in vitro*, these results may predict the clinical answer, and however, this answer depends on several factors intrinsic to the antifungal the host as well as pathogen versus host interaction.

**Objective:** This study was evaluate, the efficacy antifungal therapy of fluconazole associated with amphotericin B in experimental systemic cryptococcosis in immunocompetent (BALB/c) and immunodeficient (BALB/c-SCID).

**Methods:** The animals were inoculated through into the tail vein. The treatment was initiated one day after infection, and animals were treated daily for fifteen days.

**Results:** The study demonstrated that immunocompetent and immunodeficient animals, treated for thirteen days and fifteen days respectively, survived the study period and brain tissue of these animals were free of *Cryptococcus neoformans*.

**Conclusion:** The present results suggest that the combination amphotericin B (1.5 µg kg<sup>-1</sup> day<sup>-1</sup>) and fluconazole (30.0 µg kg<sup>-1</sup> day<sup>-1</sup>) was effective in the treatment of cerebral cryptococcosis in two models studied.