Variation in the polysaccharide capsule size interferes with Objectives all the sera from FLD patients (dehydrogenase, ATP synthase alpha, dihydrolipoyl dehydrogenase. FLD specific spots were cut from the gel and analyzed by LC-MS/MS. and HEC serum, 25 spots were considered as FLD specific. The 25 was assessed with all the sera from FLD patients and controls.

Poster Presentations

We recruited 41 FLD patients and 43 HEC from five university hospital pneumology departments in France and Switzerland. L. corymbifera proteins were extracted from the reference strain BCCM/ BBM 3809 isolated from FLD-linked hay. Proteins were separated by two-dimensional electrophoresis and subjected to western blotting, with sera from FLD patients (n = 7) or controls (n = 9). FLD-specific proteins were identified by mass spectrometry (LC-MS/MS) and were produced as recombinant antigens as previously described. The diagnostic performance of ELISA tests using the recombinant antigens was assessed with all the sera from FLD patients and controls.

Result When compared western blot membranes revealed by FLD and HEC serum, 25 spots were considered as FLD specific. The 25 FLD specific spots were cut from the gel and analyzed by LC-MS/MS. Sixty-nine different proteins were identified from the 25 spots. Six proteins were selected to be produced as recombinant antigens: acylCoA dehydrogenase, proteasome alpha, pyruvate kinase, malate dehydrogenase, ATP synthase alpha, dihydrolipoyl dehydrogenase.

ELISA tests were performed using each recombinant antigen, with all the sera from FLD patients (n = 41) and controls (n = 43). Dihydrolipoyl dehydrogenase was the most effective recombinant antigens for discriminating FLD patients from controls, with AUC = 0.82 and with sensitivity and specificity of 81% and 77%, respectively. ELISA using proteasome alone showed AUC above 0.80, with sensitivity of 88%, but sensitivity was only 65%.

Conclusion Involvement of L. corymbifera in FLD has been described mainly in East of France and Finland. Combining recombinant antigens from L. corymbifera with recombinant antigens from other microorganisms (Saccharopolyspora rectivirgula, Aspergillus) involved in FLD would be probably helpful to produce a standardised ELISA kit effective for diagnosing FLD whatever the geographic location of the patient. A prospective study, using such a test combining most effective recombinant antigens from S. rectivirgula and from Aspergillus with dihydrolipoyl dehydrogenase and proteasome alpha from L. corymbifera, is ongoing in our lab to assess diagnosis performance with patients from different geographic origins.


Material and methods This retrospective study included 4193 biological samples from patients with medical suspicion of fungal infection, collected from 2004 to 2013. Samples were obtained by extracting hairs and scraping skin and nails using a sterile curette over the affected areas. Samples were macroscopically examined after 30% W/V for 20 min potassium hydroxide preparation and cultured on Sabouraud dextrose agar with cicloheximide. Species were identified by the observation of morphological features that included colony pigmentation, texture, growth rate and distinctive microscopic structures. Physiological tests (urea, vitamin and amino acid test agars) were used whenever necessary.

Results The average frequency of dermatophyte infections was 21%, ranging from 18% to 26%; 841 individuals (425 female and 410 male) had positive cultures. Tinea capitis was confirmed in 236 (28%) patients and was more prevalent in children from the group of 1–9 years old. In scalp dermatomycosis, Microsporum audouinii was the most frequently isolated species (N = 140, 51%). Capillaria t. oudinii followed by C. t. sudanense (N = 44, 19%). Males were more affected (58%) than females (42%).

Onychomycosis caused by dermatophytes were confirmed in 385 cases (46%). Other fungi recognized as cause of onychomycosis were not considered for this report. Skin samples were positive in 220 cases (26%).

The most prevalent dermatophytes isolated in nail and skin samples were T. rubrum (206 and 93 isolates, respectively) and T. mentagrophytes with (49 and 39 isolates respectively). E. floccosum was the species less frequently found in skin samples (1%).
Conclusion The frequency of infections by dermatophytes has revealed itself steady for the last 10 years. The spectrum of dermatophytes is similar to those reported in other studies for tinea corporis and onychomycosis, being T. rubrum the main aetiological agent. However, our results differed from several studies that describe a raise, during the recent years, in the number of cases of tinea capitis caused by M. canis, especially in other Mediterranean countries. Our results showed a high prevalence of anthropophilic species (M. audouinii and T. soultanense) in the region of Lisbon and Tagus valley, where the number of foreign citizens from African countries is higher.

Like in other studies the number of infections by E. floccosum was very low suggesting that there was a replacement of this aetiological agent by other dermatophytes like T. rubrum.

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In treatment of primary cutaneous Aspergillosis, systemic antifungal therapy and surgical management; Presentation of two cases

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Objectives Aspergillus skin involvement occurs by hematogenous spread or local inoculation. Primary cutaneous aspergillosis that appears with local inoculation is rarely determined on immunocompetent patient. However, it is an important cause of morbidity and mortality in surgical patients. Treatment is controversial and different medical and/or surgical approaches can be applied. Here, two cases of primary cutaneous aspergillosis diagnosed with the growth of Aspergillus flavus on tissue samples are presented. In the treatment of patients, voriconazole and surgical treatment was applied together. Different methods were used for the wound care.

Methods Patient 1: 53 years old female, who had a motorcycle accident resulted with left leg injury. She had a wound with a large tissue defect on her left cruris with tibia and fibula fracture. Together with fracture treatment repeated surgical debridement were applied on her wounds that had wide tissue defects. But in 3 weeks of surgical treatment due to the appearance of infected necrotic tissue, the wounds were debrided again for the tissue cultures. A. flavus has grown in culture. For the distinction of colonisation and infection, tissue cultures were repeated for twice. A. flavus has also grown in both. Fungal spores and hyphae structure branching with narrow angle were demonstrated. Because of having necrotic areas with the continuing infected appearance and growing of A. flavus in 3 consequent tissue cultures she was treated with recurrent surgical debridement and iv voriconazole. Antibacterial absorbent polymer dressing - Sorbact absorption dressing: SB was also used for the wound care. After third week of the treatment there was no fungus growth in cultures. Reconstruction was made with the skin graft taken from lateral side of right thigh. Voriconazole therapy was completed in 12 weeks (Figure 1).

Patient 2: 39-years old male patient applied to emergency service on her wounds that had wide tissue defects. But in 3 weeks of surgical treatment due to the appearance of infected necrotic tissue, the wounds were debrided again for the tissue cultures. A. flavus has grown in culture. For the distinction of colonisation and infection, tissue cultures were repeated for twice. A. flavus has also grown in both. Fungal spores and hyphae structure branching with narrow angle were demonstrated. Because of having necrotic areas with the continuing infected appearance and growing of A. flavus in 3 consequent tissue cultures she was treated with recurrent surgical debridement and iv voriconazole. Antibacterial absorbent polymer dressing - Sorbact absorption dressing: SB was also used for the wound care. After third week of the treatment there was no fungus growth in cultures. Reconstruction was made with the skin graft taken from lateral side of right thigh. Voriconazole therapy was completed in 12 weeks (Figure 1).

Discussion Primary cutaneous aspergillosis may develop at intra-venous catheter insertion sites and under adhesive tape dressings and bandages or in cases whose skin integrity is impaired. Both of the reported cases are primary cutaneous aspergillosis. It has been thought that slow progressive massive necrosis might be guiding for the opportunistic fungus infection in both cases. In treatment of cases, repeated debridement/ different wound care and systemic voriconazole treatment was administered together. In slow but progressively destructive post-traumatic wound infections, primary cutaneous aspergillosis should be considered in differential diagnosis.

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Fusarium solani isolated from patients with onychomycosis: nail infection potential and biofilm formation ability

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Objective The aim of the present study was to perform an epidemiological study, evaluate the ability of Fusarium solani to use the human nail as a single source of nutrients and its potential for biofilm formation.

Methods We first performed an epidemiological study to determine the frequency of F. solani in patients with onychomycosis. The study included data from all patients who attended the Teaching and Research Laboratory of Clinical Analysis (LIPAC), Division of Mycology, Universidade Estadual de Maringá (UEM), between January and December 2013 with suspected onychomycosis. This descriptive, retrospective, cross-sectional, observational study was