

existed, risk populations were used to estimate frequencies of fungal infections, using previously described methodology by LIFE (www.LIFE-Worldwide.org).

Results: The population of Cote d'Ivoire is around 24 millions; 37% are children, and 9% are >65 years. Tinea capitis in children is common, measured at 13,9% in the last epidemiological study (2013). Considering the prevalence of HIV infection (2.7% of the population, a total of ~500,000) and a hospital incidence of 6% of cryptococcosis, it is estimated that 3726 patients per year develop cryptococcosis. For pneumocystosis, it is suggested that 6023 new cases occur each year with the prevalence of 14,1% in paediatric HIV infection. An estimated 1567 new cases of chronic pulmonary aspergillosis occur after pulmonary tuberculosis (a 5 year prevalence of 4938 cases (20.3/100,000)). Allergic bronchopulmonary aspergillosis (ABPA) and severe asthma with fungal sensitisation (SAFS) were estimated in 104/100,000 and 151/100,000 respectively, in 1,100,000 adult asthmatics. Vulvovaginal candidiasis (VVC) is common and recurrent VVC affects ~6% of women in their fertile years - 407,000 women. An unknown number develop candidaemia and invasive aspergillosis. There are no incidence data on fungal keratitis, histoplasmosis and chromoblastomycosis, although some cases of mycetoma and histoplasmosis have been reported.

Conclusion: The present study indicates that around to 6.8% (1.6 million) of the population is affected by a serious fungal infection, predominantly tinea capitis in children and rVVC in women. These data should be used to inform epidemiological studies, diagnostic needs and therapeutic strategies in Cote d'Ivoire.

P223

Frequency and molecular epidemiology of *Aspergillus* isolated from patients with suspicion of respiratory fungal infection

M. Oliveira^{1,2}, H. Simões³, C. Verissimo¹, R. Sabino¹

¹Infectious Diseases, National Health Institute Dr. Ricardo Jorge, Lisbon, Portugal, ²Animal Biology Department, Faculty of Sciences of the University of Lisbon, Lisbon, Portugal, ³Infectious Diseases, National Health Institute, Lisbon, Portugal

Objectives: The aim of this study was to determine the frequency of *Aspergillus* detected in respiratory samples from a cohort of patients with suspicion of fungal infection of the respiratory tract as well as to determine the susceptibility to azoles of the isolates from the *Fumigati* section.

Methods: A retrospective study was performed involving samples obtained from 16 hospitals covering different districts of continental Portugal and Azores islands. One hundred and eighty-seven respiratory samples (101 bronchoalveolar lavage fluids, 52 bronchial lavages, 27 bronchial secretions, 6 expectorations and 1 bronchial aspirate) were collected between November 2011 and December 2017 from a cohort of 146 patients with suspicion of respiratory fungal infection (ages ranging from 20 to 87 years old). Demographic and clinical data were recorded. Detection of *Aspergillus* was done by culture, immunoenzymatic assay and/or molecular techniques. *Aspergillus* molecular identification to species level was performed by sequencing of the calmodulin and β -tubulin genes. To detect possible resistance to azoles, isolates belonging to section *Fumigati* were inoculated into Sabouraud dextrose agar media supplemented with 1 μ g/ml or 4 μ g/ml of voriconazole, 4 μ g/ml of itraconazole and 0.5 μ g/ml of posaconazole and their growth was observed and recorded after 7 days of incubation at 27°C. Doubtful results were confirmed when possible by E-test and by real-time multiplex PCR for the detection of mutations in the Cyp51A gene.

Results: Fifty-seven (39.0%) of the studied patients were positive for *Aspergillus*. From the cases with a positive culture ($n = 58$) the species were identified by sequencing and belonged to six different sections. The most frequently isolated was the section *Nigri* (42.1%) followed by the *Fumigati* (33.3%) and *Flavi* sections (8.6%). Regarding the species, the most frequent was *A. niger sensu stricto* (33.9%) followed by *A. fumigatus sensu stricto* (32.1%). Nine cryptic species were also identified which frequency was 21.4%. In order to study the frequency of azole resistance in *Fumigati* isolates collected from the samples of this cohort as well from other biological products, 52 isolates - *Aspergillus fumigatus sensu stricto* ($n = 45$), *A. lentulus* ($n = 4$), *A. udagawae* ($n = 2$) and *A. pseudofelis* ($n = 1$) - were tested. The tested *A. fumigatus sensu stricto* isolates did not show resistance to azoles. An *A. udagawae*