Title: DETECTION OF CRYPTOCOCCUS NEOFORMANS AND C. GATTII FROM INDOOR DUST FROM HOUSES IN RURAL AREAS OF IRANDUBA, AMAZONAS, BRAZIL

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Abstract:
Cryptococcosis is a systemic mycosis caused by Cryptococcus that has a high mortality. This study evaluated the indoor dust from houses in rural communities of Iranduba/AM as an environmental source of Cryptococcus infection. The municipality of Iranduba is the only one located among the Rio Negro - dark waters and white sandy beaches - and Rio Solimões - muddy waters with rich animal life. The labor occupations in these rural communities are agriculture and fishing. To carry out this work 160 household dust were collected, 77 (48.12%) of “Comunidade São Sebastião da Serra Baixa” and 83 samples (51.87%) from “Comunidade do Limão” were collected, 68 located in dry areas and 15 in flooded areas after rain period. One gram of each sample was suspended in 50 mL 0.9% sterile saline. After agitation and rest, 0.1mL was plated on NSA (Niger Seed Agar) medium with chloramphenicol (10 plates for each sample), which were incubated at 30°C/5 days. Each phenol oxidase-positive/brown colony was subcultured on NSA medium. The yeast isolates were tested for thermotolerance at 37 °C, sensitivity to cycloheximide, growth on medium CGB and genotyping by molecular biology. Two dust samples (2.59%) from “Comunidade São Sebastião da Serra Baixa” were positive, one for Cryptococcus neoformans molecular type VNI and other C. gattii molecular type VGII. Samples of “Comunidade do Limão” were positive in 10 houses (12.04%), where it was possible to identify the mixed presence in 3 of these houses, with the existence of both C. neoformans molecular type VNI and C. gattii molecular type VGII sharing the same habitat. Therefore, it is confirmed the presence of C. neoformans and C. gattii in indoor dust from house in rural areas of Iranduba-AM, which is the first report of the joint occurrence of these species in household dust in Amazonas state.

Keywords: Cryptococcus, Indoor Dust, environmental

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