

A Fungus is Major Cause of Death Among People with HIV in the Brazilian Amazon

The results of the study underline the need to implement sensitive methods to detect Histoplasma infections in endemic regions

Barcelona, June 1, 2021 -. A series of **autopsies performed in an infectious disease hospital in the Brazilian Amazon** reveals that infections by the ***Histoplasma* fungus** are a major cause of death in **people with HIV**. The study, led by Barcelona Institute for Global Health ([ISGlobal](#)), an institution supported by “la Caixa” Foundation, in collaboration with a team in Manaus, highlights the need of implementing sensitive methods to detect these infections in *Histoplasma*-endemic regions.

Histoplasmosis is a **lung infection** caused by inhalation of spores from a fungus (*Histoplasma*), and is frequent in some areas of the US, Africa, and Latin America. In the majority of individuals with a functional immune system, the infection causes mild symptoms. However, **in people who are immuno-compromised**, such as people with HIV, **the infection can disseminate to other parts of the body** and, if not treated, lead to death.

“The problem is that the precise burden of the disease in endemic regions is not known, since **its symptoms are frequently mistaken for tuberculosis**,” says Miguel Martinez, ISGlobal researcher and stud coordinator. In the framework of the [CaDMIA project](#) – which developed and validated a minimally invasive autopsy method – the ISGlobal team, in collaboration with Brazilian researchers, performed a series of **complete autopsies in 61 patients** who died in a Manaus hospital specialised in tropical diseases.

Using microscopic and molecular techniques, the research team found **evidence of *Histoplasma* infection in one out of three deceased individuals**. In a high percentage of cases, all of which were HIV-positive, the infection was disseminated and had severely damaged other organs. In addition, genomic sequencing of the isolates suggests a **high diversity of *Histoplasma* strains circulating in the area**.

“Despite the high mortality due to histoplasmosis, **75% of the cases were not clinically suspected**,” says Natalia Rakislova, first author of the study.

Given the high incidence of histoplasmosis, the low rate of clinical suspicion, and the severity of disseminated disease, the authors recommend a preventive antifungal treatment in seriously immunocompromised patients with HIV living in regions where *Histoplasma* is endemic. The study results also highlight the **need to actively implement sensitive routine tests to detect this pathogen**.

Reference

Rakislova N, Hurtado JC, Palhares AEM et al. High prevalence and mortality due to Histoplasma capsulatum in the Brazilian Amazon: An autopsy study. Plos Negl Trop Dis. 2021. 15(4): e0009286. April 5, 2021. <https://doi.org/10.1371/journal.pntd.0009286>

About ISGlobal

The Barcelona Institute for Global Health, ISGlobal, is the fruit of an innovative alliance between the "la Caixa" Foundation and academic and government institutions to contribute to the efforts undertaken by the international community to address the challenges in global health. ISGlobal is a consolidated hub of excellence in research that has grown out of work first started in the world of health care by the Hospital Clínic and the Parc de Salut MAR and in the academic sphere by the University of Barcelona and Pompeu Fabra University. Its working model is based on the generation of scientific knowledge through Research Programmes and Groups, and its translation through the areas of Training and Analysis and Global Development. ISGlobal has been named a Severo Ochoa Centre of Excellence and is a member of the CERCA system of the Generalitat de Catalunya.

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