

INVASIVE *Fusarium* DISEASE CAUSED BY *Fusarium proliferatum* IN A PATIENT WITH LEUKEMIA ADMITTED TO A PUBLIC CHILDREN'S HOSPITAL

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Abstract

The species of the genus *Fusarium* are ubiquitous microorganisms commonly found in soil, air, water, plant and animal. They are recognized mainly as phytopathogens of plant species. In clinical mycology, these fungi are opportunistic pathogens that, in most cases, cause superficial infections, such as onychomycosis, but can cause locally invasive and disseminated infections, especially in immunocompromised and hospitalized patients, which can lead to death. Currently, this species of the genus *Fusarium* are considered an emerging pathogen. We report a case of *Fusarium proliferatum* invasive fusariosis in an 11-year-old male with acute T-cell lymphocytic leukemia admitted to a Public Children's Hospital in São Paulo, Brazil. Clinical diagnosis showed prolonged neutropenia. This patient was hospitalized for chemotherapy and after one week presented fever and septicemia. This pediatric patient was treated with liposomal amphotericin B and was successful. After discharge from the hospital he continued to take oral fluconazole for 12 days and had an excellent outcome. The identification of the fungus was performed by traditional methods (macro and micro-morphological analysis). The study of the isolated blood strain revealed macroscopic characteristics (on agar PDA appears cottony colonies with white aerial mycelium with center in violet tone, reverse with brown pigment and in Sabouraud agar cottony colonies as aerial mycelium white with center in brown tone, reverse with orange pigment) and microscopic characteristics (abundant and truncated base microconidia, rare chlamydoconidia, septate hypha cluster, conidiogenic cells, monophialides and abundant polyphialides) typical of *Fusarium proliferatum*. Due to the increase in invasive cases of filamentous fungi, there is a great importance in identifying them for an accurate diagnosis and a more effective treatment. Fusariosis, in its disseminated form, is an infection of suspected difficult diagnosis and even with treatment, most of the time the evolution of the condition may coincide with death of the patient. It should be noted that invasive fusariosis caused by the *F. proliferatum* species is uncommon.

Keywords: *Fusarium proliferatum*, invasive fusariosis, hospitalized children, leukemia, public children's hospital.

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