# Epidemiology, clinical aspects, outcomes and prognostic factors associated with Trichosporon fungaemia: results of an international multicentre study carried out at 23 medical centres

## Abstract

**Background:** Trichosporon fungaemia (TF) episodes have increased in recent years and mortality rates remain high despite the advances in the management of sepsis. New concepts about its clinical course, treatment and microbiology need to be investigated for the better management of this infection.

**Objectives:** To describe the aetiology, natural history, clinical management and prognostic factors of TF.

**Methods:** TF episodes documented between 2005 and 2018 in 23 South American centres were retrospectively investigated by using a standard clinical form. Molecular identification, antifungal susceptibility testing and biofilm production were also performed.

**Results:** Eighty-eight TF episodes were studied. Patients had several underlying conditions, including haematological diseases (47.7%), post-operative status (34%), solid organ transplants (n = 7, 7.9%), among others. Seventy-three (82.9%) patients had a central venous catheter (CVC) at TF diagnosis. The 30 day mortality rate was

51.1%. Voriconazole-based therapy was given to 34 patients (38.6%), with a 30 day mortality rate of 38.2%. Multivariate predictors of 30 day mortality were age (OR 1.036), mechanical ventilation (OR 8.25) and persistent neutropenia (OR 9.299). CVC removal was associated with over 75% decreased risk of 30 day mortality (OR 0.241). Microbiological analyses revealed that 77.7% of the strains were identified as Trichosporon asahii, and voriconazole showed the strongest in vitro activity against Trichosporon spp. Most of the strains (63%) were considered medium or high biofilm producers.

**Conclusions:** Older age, mechanical ventilation and persistent neutropenia were associated with poor prognosis. CVC may play a role in the pathogenicity of TF and its removal was associated with a better prognosis.

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