
CLINICAL SIGNIFICANCE OF ASPERGILLEMIA IN HEMATOPOIETIC STEM CELL TRANSPLANT RECIPIENTS (HSCT): A 23 YEARS EXPERIENCE

Simoneau E, Kelly M, Labbe AC, Roy J, Laverdiere M
Dept of Microbiology and Hematology, Hôpital Maisonneuve-Rosemont, Montreal, Canada

Background: The clinical significance of blood cultures positive for *Aspergillus species* is unclear. True aspergillemia is rare and has been reported mainly in severely immunocompromised cancer patients with hematologic malignancies. The present study evaluates the clinical significance of positive blood cultures for *Aspergillus* observed over a 23 year period in a single HSCT center.

Methods: We reviewed the blood culture records of all patients who underwent a HSCT at Hôpital Maisonneuve-Rosemont (HMR) between April 1980 and December 2002. Recipients of > 1 HSCT procedure were counted as a different patient. All episodes of positive blood cultures with different microorganisms, and same microorganism episodes at least 7 days apart, were included in the study. Medical records of patients with positive blood cultures with *Aspergillus species* were reviewed to determine the significance of these positive cultures. *Aspergillus* fungemia was classified as definite, probable or pseudofungemia according to previously proposed criteria.

Results. Over the 23 year period, 1453 patients were transplanted. A total of 939 different episodes of bloodstream infections in 525 (36%) recipients were documented. Of these 525 patients, 377 were identified in recipients of allogeneic transplant and 148 in autologous transplant recipients. Aspergillemia was observed in 8 patients. In all patients the *Aspergillus species* were recovered from a single blood culture sample and during the period when a lysis centrifugation blood culture system was used. *Aspergillus fumigatus* was identified in 3 patients. *Aspergillus niger* in 2 patients, non-speciated *Aspergillus* in 3 patients. The medical records of 7 patients were available for review. None of the 7 patients had compatible clinical histologic nor microbiologic evidence of invasive aspergillosis. All 7 blood cultures were categorized as pseudofungemia.

Conclusion: Positive blood cultures for *Aspergillus species* is a rare event in HSCT recipients. Even in a high risk population for invasive Aspergillosis, it represented pseudofungemia in our patients, and was likely linked to the potential for environmental contamination of the lysis centrifugation blood culture system.