MeetingsPremium
MP Journal of Medical Research
Journal of poster communications · ISSN application in progress
Vol. 1 · 2026-0005
OPEN ACCESS

TYPE
Poster communication

SPECIALTY
Infectious Diseases

PRESENTED AT
44ème Réunion Interdisciplinaire de Chimiothérapie Anti-Infectieuse (RICAI), Paris, 16–17 December 2024

PUBLISHED
1 October 2026

DOI
10.5281/zenodo.23166776

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KEYWORDS
bacteremia · allogeneic transplantation · hematopoietic stem cells · pediatrics · Gram-negative bacilli · antibiotic resistance

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POSTER COMMUNICATION · INFECTIOUS DISEASES

Prevalence of Gram-Negative Bacilli Bacteremia After Allogeneic Hematopoietic Stem Cell Transplantation in Pediatrics

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English version of a poster presented in French.

KEY MESSAGES

1. Les bactériémies sont fréquentes chez les enfants allogreffés de cellules souches hématopoïétiques en pédiatrie.
2. Les bacilles Gram négatif dominent nettement parmi les germes responsables des bactériémies.
3. Les entérobactéries présentent des taux élevés de résistance aux antibiotiques, nécessitant une surveillance attentive.

ABSTRACT

Introduction. Allogeneic hematopoietic stem cell transplantation (HSCT) is an essential therapy for various pediatric hematologic diseases, but it is associated with a high risk of infectious complications. Bacteremias represent a major cause of morbidity and mortality in transplanted patients due to profound immunosuppression and disruption of mucosal barriers.

Materials and methods. This retrospective study included children who underwent allogeneic HSCT in the Pediatric Immuno-Hematology and Transplantation Department presenting at least one episode of bacteremia between January 2018 and May 2024. Blood culture bottles were incubated using the BACT/ALERT automated system (BioMérieux). For commensal species, bacteremia was defined by the presence of at least two positive blood cultures with the same organism.

Results. A total of 130 bacteremias were identified in 82 allogeneic HSCT recipients, with a prevalence of infected patients of 41.8%. Twenty-three patients had two or more bacteremic episodes. Central venous catheter-related bacteremias accounted for 16.9% of cases. The Gram-negative bacilli to Gram-positive cocci ratio was 2.51. The most frequently implicated organisms were Enterobacteriaceae. Antibiotic resistance rates were higher among Enterobacteriaceae than among non-fermenting Gram-negative bacilli. Among 21 coagulase-negative staphylococci strains, 19 were methicillin-resistant, seven were resistant to gentamicin, and four to ciprofloxacin. All eleven Staphylococcus aureus strains were methicillin-sensitive except one. No staphylococcal strain was resistant to glycopeptides.

Conclusion. The prevalence of bacteremia in pediatric allogeneic HSCT recipients is high, with a clear predominance of Gram-negative bacilli.

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KEY FIGURE

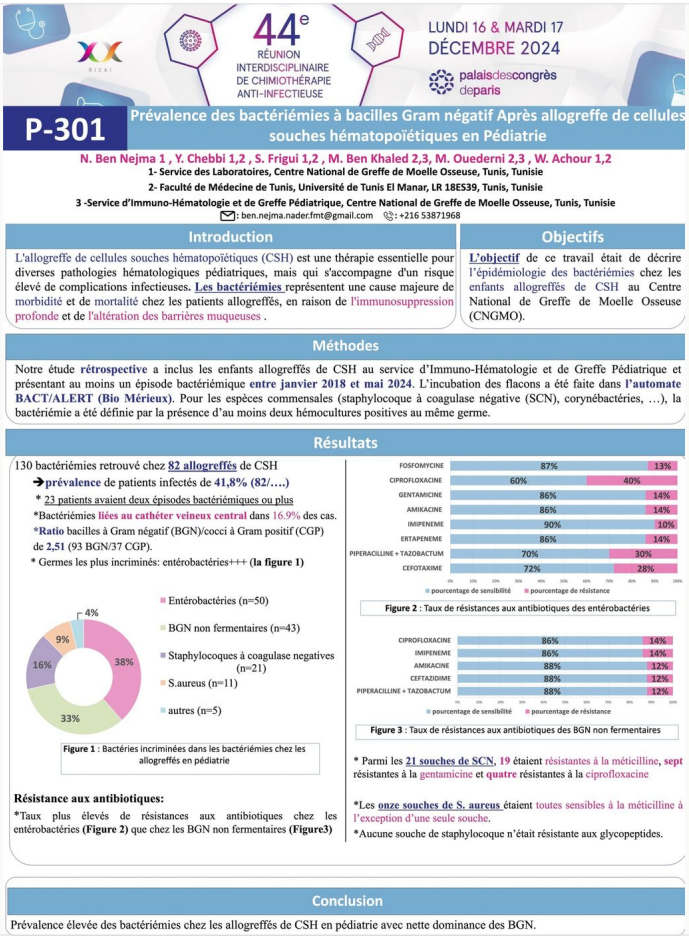


Figure 1 : Bactéries incriminées dans les bactériémies chez les allogreffés en pédiatrie

CITE THIS PUBLICATION

Ben Nejma N, Chebbi Y, Frigui S, Ben Khaled M, Ouederni M, Achour W. Prevalence of Gram-Negative Bacilli Bacteremia After Allogeneic Hematopoietic Stem Cell Transplantation in Pediatrics [Poster]. MP J Med Res. 2026;1:2026-0005. doi:10.5281/zenodo.23166776

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SOURCE
Presented at 44ème Réunion Interdisciplinaire de Chimiothérapie Anti-Infectieuse (RICAI), Paris, 16–17 December 2024. Republished with the agreement of the authors.

PROCESS
Record checked by the editorial team, approved by the corresponding author, then reviewed by the journal's editorial board.

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