

KPC-Kp Management Strategy in Hematopoietic Transplant Patients: A Single Center Analysis

S. Corcione, A. Busca, N. Pagani, C. Dellacasa, U. Vitolo, G. Di Perri, F.G. De Rosa

Department of Medical Sciences, Infectious Diseases, University of Turin, Turin, Italy
Hematology Unit, City of Health and Sciences, Molinette Hospital, Turin, Italy.



INTRODUCTION

Infection and colonization by *Klebsiella pneumoniae* KPC producing *K. pneumoniae* (KPC-Kp) represent a challenging problem in stem cell transplant (HSCT) recipients for the management of post-transplant complications and also for the eligibility to transplantation in colonized patients.

MATERIALS & METHODS (I)

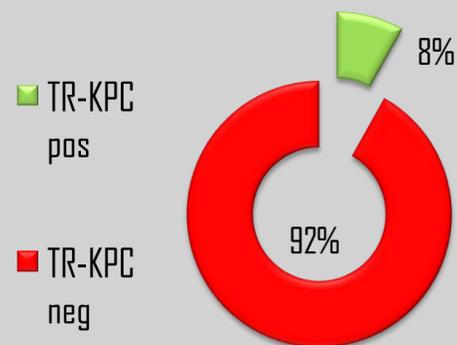
All colonized patients underwent allogenic HSCT after the decontamination trial and patients with febrile neutropenia were treated with intravenous piperacilline/tazobactam with high-dose (HD, 100 mg q12h) tigecycline, whilst patients with any clinical sign of infection or haemodynamic instability were treated by the beginning with intravenous colistin or gentamycin plus HD tigecycline and meropenem (2gr q8h).

MATERIALS & METHODS

All patients undergoing allogenic HSCT at the City of Health and Sciences, Molinette Hospital in Turin, were routinely screened for KPC-Kp since January 2013, with weekly rectal swabs for KPC-Kp. Decontamination trial with oral gentamicin within the 20 days before HSCT was administered only for colonized patients. Effective decolonization was defined as two consecutive negative results from rectal swabs before HSCT

RESULTS

49 patients were routinely screened with rectal swabs for KPC-Kp.; 26 patients received a match unrelated donor, 8 received an aploidentical and 15 received a match sibling donor HSCT, with a mean duration of neutropenia of 15 (+7SD) days. Fortyfive patients (92%) had a negative rectal swab before HSCT, whilst four (8%) were positive (Graphic 1).



The main clinical characteristics of patients were reported in Table 1.

Sex, Age Hematological disease	Preparative Regimen	KPC-Kp rectal swabs after Decontamination	Pip/tazo plus HD Tigecycline for Febrile Neutropenia	Tigecycline+colistin/gentamicin+ meropenem For Severe Sepsis
Male, 54 AML	Reduced intensity conditioning	+	Yes	No
Female, 39 AML	Reduced intensity conditioning	-	Yes	Yes
Male, 36 AML	Myeloablative	+	Yes	No
Female, 21 AML	Myeloablative	-	No	No

- ✓ Eradication rate of 50% (2 out of 4).
- ✓ There was only one death (25%) which was unrelated to infection cause.
- ✓ Three patients are alive at one years of follow up.

CONCLUSION

- ✓ Selective gut decontamination could be an important approach to reduce the risk of spreading severe infection in HSCT patients.
- ✓ An integrated treatment strategy may be implemented for all haematological patients colonized by KPC-Kp undergoing allogenic HSCT

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