

POSTER PRESENTATION

Open Access

A change for the antibacterial treatment policy to decrease carbapenem consumption at a hematopoietic stem cell transplant center

G Metan^{1,2*}, L Kaynar³, N Yozgat⁴, F Elmali⁵, C Altay Kurkcuoglu⁶, E Alp¹, M Cetin³

From 3rd International Conference on Prevention and Infection Control (ICPIC 2015)
Geneva, Switzerland. 16-19 June 2015

Introduction

Carbapenems are widely used in the treatment of febrile neutropenia. However, this resulted a high rate of carbapenem resistance in our hematopoietic stem cell transplantation (HSCT) center.

Objectives

Here, we want share the results of antibacterial usage policy which allowed to decrease the consumption of carbapenems.

Methods

An intervention in two stages was introduced in HSCT center. At the first eight months of 2014, carbapenems remained to be the first choice for febrile neutropenic patients while the use of piperacillin/tazobactam (TZP) was encouraged in patients with stable clinical condition. When blood cultures were reported as negative and patient was clinically stable the carbapenem/TZP treatment was stopped regardless of continuous fever and neutrophil count. From October 2014, TZP (with prolonged infusion) with or without amikacin replaced carbapenems as the first line therapy of neutropenic fever. Daily defined dosages (DDD) per 1000 patient days were calculated for all antibiotics by the hospital pharmacist for each year.

Results

A total of 913 admissions with 11,544 patient days were followed in 2013; and 1,072 admissions with 11,843 patients days were followed in 2014. An increase was observed in the rate of nosocomial pneumonia, central line associated bacteraemia and as well as the rate of ESBL

and carbapenem resistance in gram negative bacilli infections in 2014 when compared with 2013.

The DDDs/1000 patient days for imipenem, meropenem, vancomycin, teicoplanin, daptomycin, linezolid, colistin, TZP and amikacin in 2013 and 2014 were as follows; 201 vs 19; 1,578 vs 1,092; 533 vs 251; 205 vs 159; 56 vs 14; 76 vs 26; 188 vs 154; 157 vs 254; and amikacin 5 vs 41.

Conclusion

Despite the rates of nosocomial infections and antibiotic resistance increased relatively, we were able to decrease the consumption of not only carbapenems but also glycopeptides. The sustainability of such intervention needs to be monitored continuously.

Disclosure of interest

G. Metan Grant/Research support from: Associates of Cape Cod, Conflict with: Member of Advisory board for Pfizer, Gilead, Astellas, L. Kaynar: None declared, N. Yozgat: None declared, F. Elmali: None declared, C. Altay Kurkcuoglu: None declared, E. Alp: None declared, M. Cetin: None declared.

Authors' details

¹Infectious Diseases and Clinical Microbiology, Erciyes University Faculty of Medicine, Kayseri, Turkey. ²Infectious Diseases and Clinical Microbiology, Hacettepe University Faculty of Medicine, Ankara, Turkey. ³Hematology, Erciyes University Faculty of Medicine, Kayseri, Turkey. ⁴Hospital Pharmacy Unit, Erciyes University Hospital, Kayseri, Turkey. ⁵Biostatistics, Erciyes University Faculty of Medicine, Kayseri, Turkey. ⁶Infection Control Committee, Erciyes University Hospital, Kayseri, Turkey.

Published: 16 June 2015

¹Infectious Diseases and Clinical Microbiology, Erciyes University Faculty of Medicine, Kayseri, Turkey

Full list of author information is available at the end of the article

doi:10.1186/2047-2994-4-S1-P175

Cite this article as: Metan et al.: A change for the antibacterial treatment policy to decrease carbapenem consumption at a hematopoietic stem cell transplant center. *Antimicrobial Resistance and Infection Control* 2015 **4**(Suppl 1):P175.

**Submit your next manuscript to BioMed Central
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit

