IMPACT OF IMPLEMENTING A CARBAPENEM STEWARDSHIP PROGRAM

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BACKGROUND

A carbapenem stewardship program was developed by a multidisciplinary team of specialists in Infection Diseases, Critical Care, Pharmacy, Microbiology and Preventive Medicine. It expect to promote and improve the appropriate use of carbapenems.

OBJECTIVE

To analyze the stewardship recommendations regarding the use of carbapenems.

METHOD

• Prospective study lasted four months (May-August 2014) and was conducted in a tertiary hospital.
• The stewardship’s pharmacist selected patients who start carbapenem treatment, then a medical infection specialist recommended to continue or not with carbapenems, at the beginning and on the fifth and the tenth days of treatment, through oral and/or written communications to the prescriber.
• Resuscitation and pediatric patients were excluded.
• Analyzed variables:
  - Number and timing of interventions.
  - Type of recommendations and level of acceptance.
  - Cost (€) and defined daily dose (DDD) of carbapenems/100 stays of the studied period and compared with the same period last year.
  - Impact on other antimicrobials DDD/100 stays index.

RESULTS

• A total of 210 recommendations were made, of which 69% were at the beginning, 22% on the fifth day and 9% on the tenth day.
• The recommendations were: antibiotic de-escalation (42%), continuation (38%), suspension of carbapenem (15%) and change of regimen (5%).
• 89.3% of the recommendations were accepted.
• Cost and DDD/100 stays of carbapenems were reduced by 63% and 58% over the same period in 2013 respectively.
• Regarding other antimicrobials, we must stand out the increase of DDD/100 stays for cloxacillin (74.6%) and piperacillin/tazobactam (27.4%) over the same period in 2013.

CONCLUSIONS

✓ The implementation of the carbapenem stewardship program has identified more than 60% of carbapenem prescriptions that could be improved.
✓ The high level of acceptance of recommendations has significantly reduced the use of carbapenems because many of inappropriate treatments were suspended and the use of narrow-spectrum antimicrobial increased.
✓ In future analysis, impact resistance profile of the Hospital should be considered.

Abstract number: CP-132  
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20th Congress of European Association of Hospital Pharmacists 25-27 March – 1, Hamburg, Germany