was >90% for both infusions at 0.5 and 3 hours. For tazobactam, the PTA fT >70% MIC for a ClCr=70 mL/min for the doses 0.5 g/8 hours and 0.5 g/6 hours were 56% and 89%, increasing in the extended infusion of 3 hours (87% and 98%). For a ClCr >120 mL/min, this probability was significantly reduced, being <50% for the dose 0.5 g/8 hours in a 0.5 hour infusion.

Conclusion and relevance The pharmacokinetic/pharmacodynamic objective of fT >100% MIC for piperacillin/tazobactam required a dose of 4/0.5 g/6 hours or extended infusion, especially in patients with high renal clearance and in strains with high levels of expression of beta-lactamases.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-053 ANTIMICROBIAL STEWARDSHIP PROGRAMME IN AN INTENSIVE CARE UNIT

¹E Sánchez Yañez*, ¹M Valera-Rubio, ¹I Moya-Carmona, ¹MR Mora-Santiago, ²C Pérez-López. ¹Hospital Clínico Virgen De La Victoria, Pharmacy Department, Malaga, Spain; ²Hospital Clínico Virgen De La Victoria, Infectious Disease, Malaga, Spain

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Background and importance The antimicrobial stewardship programmes are essential to achieve proper use of antibiotics, especially in units of special complexity, such as the intensive care unit (ICU).

Aim and objectives To show the antibiotic pressure in the ICU and the groups of antibiotics with greatest deviation in their consumption (2017); to describe the activities carried out by the ICU antimicrobial stewardship team (ICU-AST) from 2018 to June 2019; and to show the results obtained in 2018 and in the first and second quarters of 2019.

Material and methods • This was a prospective intervention study from January 2018 (when 2017 ICU antibiotic pressure data were obtained) to June 2019.

• The ICU-AST comprised an intensive care doctor, microbiologist and hospital pharmacist, all with experience in AST.

• The activities and interventions of the ICU-AST were agreed in the commission of infections after analysis of the data obtained. To measure antibiotic pressure, the rate DDD/1000 bed days was used. All antibiotic pressure data were obtained by the hospital pharmacist who analysed consumption in the ICU from electronic prescriptions data.

• All actions carried out by the group were recorded in a database (Excel) where all variables were coded (date, training activity, information feedback and modification in prescriptions).

Results Data were adjusted so that changes in DDD (2019) did not generate interference. Antibiotic pressure in the ICU (2017): 2295.85 DDD/1000 bed days. Groups of antibiotics with greatest deviation: carbapenems 333.03 DDD/1000 bed days and antifungals 210.95 DDD/1000 bed days.

Activities carried out by ICU-AST: in 2018, the interventions (n=943) performed to reduce antibiotic pressure and carbapenem and antifungal consumption were adequacy of prescriptions to the internal guidelines (33.54%), de-escalation of treatments (27.32%), proposition of short course treatments (19.36%), broad spectrum restriction (10.57%) and other (9.21%). Four training sessions on antibiotic prescriptions were conducted (2018) and antibiotic pressure data were shown quarterly (2018–June 2019). All antibiotic treatments

were reviewed 48–72 hours after initial administration by the ICU-AST.

No additional economic resources were needed as the ICU-AST was formed by professionals who already worked in the centre.

The results obtained were

- Antibiotic pressure:
 - 2018: 2078.88 DDD/1000 bed days
 - 1st quarter 2019: 1760.55 DDD/1000 bed days
 - 2nd quarter 2019: 1830.95 DDD/1000 bed days
- Carbapenems:
 - 2018: 329.43 DDD/1000 bed days
 - 1st quarter 2019: 211.34 DDD/1000 bed days
 - 2nd quarter 2019: 232.29 DDD/1000 bed days
- Antifungals:
 - 2018: 132.26 DDD/1000 bed days
 - 1st quarter 2019: 120.22 DDD/1000 bed days
 - 2nd quarter 2019: 108.67 DDD/1000 bed days

Conclusion and relevance In 2017, antibiotic pressure in the ICU was high. Two groups of antibiotics had excessive consumption: carbapenems and antifungals.

The ICU-AST carried out training sessions, feedback of antibiotic pressure data and intervened directly, modifying the antibiotics treatment.

This intervention achieved a decrease in global antibiotic pressure in the ICU. In addition, the ICU-AST achieved a reduction in antibiotic pressure in the groups with greater deviation: carbapenems and antifungals.

A limitation of the study was that mortality was not measured, although no significant change is expected as the mortality commission did not report any significant change during the study period.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-054 A MULTIDISCIPLINARY AND EDUCATIONAL APPROACH TO ANTIMICROBIAL STEWARDSHIP PROGRAMMES IN THE EMERGENCY DEPARTMENT

I Plo Seco, L Moreno Nuñez, S Sanz Márquez, E Zhan Zhou*, J Valverde Canovas, Francisco, E Pérez Fernández, M Pérez Encinas. Hospital Universitario Fundación Alcorcón, Hospital Pharmacy, Alcorcón, Spain

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Background and importance Inappropriate prescription of antimicrobials has been shown to be a cause of microbial resistance. Antibiotics are some of the most prescribed drugs in the emergency department (ED). An educational intervention by a multidisciplinary group could be effective to improve the use of these drugs.

Aim and objectives To describe the current appropriateness of antibiotic prescription in the observation unit of the ED, and the first results of a multidisciplinary antimicrobial stewardship programme (ASP).

Material and methods A pilot interventional study over 1 month was designed. An ASP was organised, comprising an infectious diseases physician, clinical pharmacist and microbiologist. The goal was to attend the ED daily and to assess antimicrobial treatments, interacting directly with physicians and providing oral and written education according to the protocols approved by the centre.