Results A total of 177 patients were reviewed, with a mean age of 63.4 ± 16.4 and 32.8% were women. Almost half of the patients 48.6% (n=86) had an osteoarticular infection: bacteremia accounted for 36.2% (n=64). The rest of the infections were related to the central nervous system 3.4% (n=6), endovascular system 3.4% (n=6) and others 8.4% (n=15).

Patients excluded: eight due to neutropaenia (n=169), 15 due to thrombocytopenia (n=162) and 14 due to AKI (n=163) prior to vancomycin therapy.

Neutropaenia was developed in seven patients (=1:24), thrombocytopenia in 12 patients (=1:14) and AKI in 26 patients (=1:6). The prevalence of nephrotoxicity is described as common (1:100–1:10) in the summary product characteristics (SPC). However, neutropaenia and thrombocytopenia are classified as rare undesirable effects (1:10.000–1:1.000).

Conclusion The prevalence of AE related to vancomycin therapy is higher than reported in SPC. In our study neutropaenia was reported in 7:169 patients, thrombocytopenia in 12:162 and AKI in 26:163.

The difference between SPC and our clinical practice is considerable. However, it should be noticed that only patients monitored by PD were reviewed, and therefore the number of patients included is low. It is of high importance to continue reporting any AE related to vancomycin therapy to the appropriate pharmacovigilance institution in order to better understand the toxic profile of the drug.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

4CPS-061 EXTENDED INFUSION OF MEROPENEM IN A NEONATE WITH COMPLICATED KLEBSIELLA PNEUMONIAE MENINGITIS

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Background Extended infusion of beta-lactam antibiotics is aimed at achieving microbiological eradication and clinical resolution of complicated bacterial infections. For meropenem, the best predictor of bacterial killing is the time over which free-drug concentration exceeds 4–6xMIC of the microorganism (desirable 40% fT >MIC).

Purpose To describe the course and monitoring of prolonged treatment with meropenem by extended infusion of 4 hours in a neonate with ventriculitis due to ESBL-producing *Klebsiella pneumoniae*.

Material and methods We present the case of a 25 weeks' pre-term newborn, who presented with a septic episode with clinical, laboratory and ultrasonographic signs of ventriculitis at 93 days of age, in February 2018. Treatment was started with meropenem 40 mg/kg/8 hour, in an extended infusion of 4 hours. Concentrations of meropenem were determined in plasma and CSF samples before the administration of a dose (C_{min}), once steady-state equilibrium was reached. For the quantification of the levels, high-performance liquid chromatography validated techniques were used.

Results ESBL-producing *Klebsiella pneumoniae* sensitive to carbapenems (MIC Meropenem <1 mg/L) was isolated from CSF cultures. From the beginning of meropenem treatment, CSF showed progressive improvement in inflammatory parameters, and the microorganism was not isolated after 2 days of treatment. Meropenem levels in plasma and CSF were determined at 4 weeks of treatment, which were 7.6 mg/L (pre-dose) in plasma and 4.7 mg/L in CSF. These levels showed an excellent penetration of the antibiotic in CSF (CSF/plasma concentration ratio of 0.62), ensuring a time above MIC >100% in both plasma and CSF. Likewise, no potentially toxic levels were observed despite a prolonged and extended infusion strategy. The patient continued treatment until completing 8 weeks. The ventricular drain was replaced by a ventriculo-peritoneal shunt after 62 days. Clinically, the patient showed progressive improvement in neurological status. However, in view of the risk of neurodevelopmental impairment, the infant is currently under outpatient follow-up.

Conclusion With the dosing strategy used, optimal concentrations of meropenem were achieved, which allowed reaching the PK/PD index of time >4 times the MIC during 100% of the dose interval, both in plasma and in CSF.

The extended infusion of meropenem in 4 hours in our patient showed criteria of efficacy and the safety of prolonged treatment.

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Conventional versus prolonged infusion of meropenem in neonates with gram-negative late-onset sepsis: a randomized controlled trial. *Pediatr Infect Dis J* 2017;36.

No conflict of interest.

4CPS-062 IMPACT OF ANTIMICROBIAL STEWARDSHIP PROGRAMME ON CARBAPENEMS RESISTANCE AND CONSUMPTION IN A TERTIARY HOSPITAL: A BEFORE-AND-AFTER INTERVENTIONAL STUDY

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Background The treatment of infections caused by multiresistant gram-negative bacteria is a growing challenge in many hospitals. To combat this problem, the development of antimicrobial stewardship programmes (ASP), consisting of specialists in antimicrobial use from different units coordinated by infectious diseases specialists, is recommended.

Purpose The aim was to assess the impact of ASP on carbapenems resistance and consumption in a tertiary university hospital.

Material and methods A quasi-experimental study was designed before (March 2013–February 2014) and during the intervention (March 2014–February 2016). Patients prescribed carbapenems (meropenem, imipenem) were identified daily through the prescription drugs computer system (Farmatools). We recorded the impact of the programme on carbapenems consumption, in terms of defined daily dose (DDD)/1000 hospital stays, and the impact on the development of strains of *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, other *Enterobacteria* and *Acinetobacter baumannii* resistant to carbapenems using the percentage of resistance (number of resistant isolates/

total of isolates x100). The results were presented using the mean and standard deviation (SD) for quantitative data (P-values were determined using Student's *t*-test) and as percentages for qualitative variables (P-values were determined using the Chi-square test). Statistical tests were carried out at the 5% significance level. Data was performed in SPSS. The DDD/1000 patient days were calculated following the methodology of the Anatomical Therapeutic Chemical (ATC)/DDD system 2014.

Results The results show a significant reduction in the consumption of meropenem (90.53 (SD: 26.12) vs 24.96 (SD: 8.80), $p<0.001$) and imipenem (6.55 (SD: 2.75) vs 2.34 (SD: 1.34); $p<0.001$) in the intervention period. It is important to note that the carbapenem used in most cases is meropenem, being less frequent than the prescription of imipenem in our field of study. It has also been shown in this period a significant decrease in the resistance of three of the four microorganisms studied: *Klebsiella pneumoniae* (46% vs 38%, $p=0.009$), *Acinetobacter baumannii* (63% vs 32%, $p<0.001$) and *Enterobacteriaceae* (18% vs 13%, $p<0.001$), especially accentuated in the case of *Acinetobacter*. Not so in the case of *Pseudomonas aeruginosa* (17% vs 15%, $p=0.422$).

Conclusion The antimicrobial stewardship programme, aimed at optimising the prescription of antimicrobial drugs, has proven to be an effective and durable tool in combating increasing bacterial resistance and, at the same time, it has helped reduce the consumption of antimicrobials.

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No conflict of interest.

4CPS-063 IMPACT OF PHARMACEUTICAL CARE IN THE RATIONAL USE OF DAPTOMYCIN

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Background The use of empiric antibiotics more selective than broad-spectrum antibiotics is very frequent, which entails increased resistance in our environment.

Purpose To evaluate the use of daptomycin in patients with suspected infection in complicated skin and soft-tissue infections (IPPBc), infectious endocarditis (EID) by meticillin resistant staphylococcus aureus (MRSA) or bacteremia by MRSA associated with EID or IPPBc.

Material and methods Prospective longitudinal intervention study. We collected data from patients with suspected IPPBc, EID or bacteremia with prescription of daptomycin who started the treatment with daptomycin between November 2017 and September 2018. Variables: age, sex, doses and days of treatment, use, antibiogram and treatment with statins (presenting risk of creatine kinase elevation and rhabdomyolysis). Data were collected using the Farmatools program, electronic prescribing and patient history Selene. The pharmaceutical interventions were performed for the improper use of daptomycin and interactions with statins.

Results Eighty-two patients were included (51.22% women, median age: 66.56). Doses of daptomycin: 4–10 mg/kg/day; average of treatment: 10.26 days. Justification of prescribing daptomycin: IPPBc (35.38%), EID (12.20%), bacteremia (51.23%) or others (1.19%). In 67 patients (81.71%) were empirical use, in 14 patients (17.10%) with indication by MRSA and without indication (Espondilicistitis) in one patient (1.19%). In 97.56%, the antibiogram was performed which revealed that 77.5% had no indication of daptomycin. Forty-seven patients changed to another more sensitive antibiotic, whereas 15 patients continued with daptomycin. Twenty patients had concomitant treatment with statins. Thirty-eight pharmaceutical interventions were made: 17 for no indication of daptomycin and 21 for interaction with statins. Of the total, 57.89% were accepted by the doctor (18.18% for no indication, 81.82% for interaction with statins). During the study, 47 patients suspended treatment with daptomycin and 35 patients continued with them (20 with indication, 15 without indication).

Conclusion In most cases, daptomycin was prescribed for empirical use, but the treatment was suspended after the antibiogram. Pharmaceutical interventions have helped to improve the use of daptomycin and contributed to reducing the risk of resistance in our environment. Furthermore, it is important to know the pharmacological interactions when establishing an antibiotic treatment to avoid the occurrence of adverse reactions.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-064 EVALUATION OF BROAD-SPECTRUM BETA-LACTAM PRESCRIPTIONS (EXCEPT CARBAPENEMS) IN THE MILITARY HOSPITAL OF INSTRUCTION MOHAMMED V RABAT

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Background The prescription of antibiotics has become one of the most critical acts in hospitals.¹ This is related to the risk of misuse of these drugs and its impact on the development of bacterial resistance and antibiotic inefficiency.

Purpose We aimed to assess broad-spectrum beta-lactam prescriptions (except carbapenems) and the impact of controlled dispensing, antimicrobial management team and antibiotic treatment reassessment in 48–72 hours.

Material and methods This is a descriptive study, which took place on a given day in all hospital units and analysed curative antibiotic broad-spectrum beta-lactam prescriptions. The assessment focused on indication, dosing, combinations, reevaluation in 48–72 hours and treatment duration.

Results One-hundred and three prescriptions were identified: amoxicillin (9.70%, n=10), amoxicillin-clavulanic acid (43.69%, n=45), ceftriaxone (33%, n=34), piperacillin-tazobactam (3.88%, n=4), Cefazidime (7.76%, n=8), and Cefepime (1.94%, n=2). The compliance of the indication, dosage, combinations and re-evaluation at 48–