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No conflict of interest.

4CPS-038 STABILITY TO HIGH TEMPERATURES OF THE ANTIMICROBIALS USED IN OUTPATIENT PARENTERAL ANTIMICROBIAL THERAPY PROGRAMMES

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Background and importance Outpatient parenteral antimicrobial therapy (OPAT) programmes allow the administration of intravenous antimicrobials to non-hospitalised patients, offering numerous advantages. During administration, antimicrobial solutions could experience an increase in temperature after exposure to room temperature. However, studies on stability at high temperatures (35–37°C) are still very scarce.

Aim and objectives To collect high temperature stability data (35–37°C) for antimicrobials used in an OPAT programme.

Material and methods Antimicrobials used in the OPAT programme of two third level hospitals were compiled. Different sources of information were consulted (data sheet, Stabilis and Micromedex) to find stability studies for each antimicrobial at high temperatures (35–37°C). Data were classified in three groups: antimicrobials with stability data at concentrations used in OPAT, antimicrobials with stability data at other concentrations and antimicrobials without stability data.

Results The stability of 24 antimicrobials was studied: in 16.66% of cases, stability studies were found at the temperatures mentioned for the concentrations used; in 50% of cases there were stability data, but for concentrations other than those used in clinical practice and in the remaining 33.33%, there were no published data for the aforementioned temperatures.

- Stability data found:
 - a. At the concentrations used: acyclovir 3–5 mg/mL (2 weeks), cefazolin 12.5–25 mg/mL (12 hours), gentamicin 2.5 mg/mL (96 hours) and voriconazole 2 mg/mL (4 hours).
 - b. Other than the concentrations used: aztreonam 60 or 100 mg/mL (24 hours), ampicillin 0.0125 mg/mL (24 hours), cefepime 0.5 mg/mL (4 hours) and 50 mg/mL (13 hours), ceftazidime 0.1 mg/mL (2 hours) and 120 mg/mL (8 hours), ceftriaxone 10 mg/mL (2 weeks), clindamycin 0.25 mg/mL (24 hours), daptomycin 100 mg/mL (6 hours), meropenem 5 mg/mL (4 hours), piperacillin–tazobactam 128/16 mg/mL (24 hours), penicillin G 0.13 MUI/mL (5 hours), tobramycin 20 mg/mL (3 weeks) and vancomycin 1 mg/mL (4 days).

- c. Antimicrobials without studies at high temperatures: amphotericin B, cloxacillin, ertapenem, fosfarnet, fluconazole, ganciclovir, sulbactam and teicoplanin.

Conclusion and relevance

- Stability data at high temperatures were scarce for the antimicrobials used in the OPAT programme. It would be convenient to carry out corresponding studies.
- In warm environments, where the OPAT programme is established, antimicrobials and their concentrations should be adapted to the available information.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-039 NOSOCOMIAL INFECTION BY MULTIRESTANT PATHOGENS IN KIDNEY TRANSPLANT PATIENTS

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Background and importance Immunosuppression related to organ transplant is a risk factor for multidrug resistant infections.

Aim and objectives To evaluate the prevalence of nosocomial infections (NI) by multidrug resistant (MDR) pathogens, aetiological agents and treatments given to a cohort of patients undergoing kidney transplantation (KT).

Material and methods A retrospective observational study was carried out in a cohort of patients having undergone a KT during 2016–2017. Variables collected: demographics, clinical (type of KT and aetiological agent) and therapeutic (induction immunosuppressant treatments and empirical and targeted antimicrobials) data.

Results Sixty-four patients who had undergone a KT (84.4% from a cadaver, 7.8% from a live donor and 7.8% kidney–pancreas) were included (mean age 53.6±15.3 years, 72.9% men).

The most frequent induction immunosuppressant treatments were: basiliximab+mycophenolate–mofetil+steroid+tacrolimus (31.2%) and thymoglobulin+mycophenolate–mofetil+steroid+tacrolimus (65.6%).

Eight of 64 patients developed NI by MDR pathogens during hospitalisation as a result of the KT (prevalence 12.5%), isolating a total of 10 multiresistant causative agents: *Escherichia coli* (30%), *Pseudomonas aeruginosa* and *Klebsiella pneumoniae* (extended spectrum beta lactamase producing, oxa-48 carbapenemase producing (20% each) and carbapenemase producing (10%)).

The sources of NI were: urinary tract (50%), central venous catheter (30%) and abdominal (20%).

Based on patient symptoms, empirical administered antibiotics were: ceftazidime (30%), ciprofloxacin (20%), ceftriaxone (20%), meropenem, levofloxacin (10%) and piperacillin–tazobactam (10%). In all cases, once the aetiological agent was isolated, targeted treatment was used.

It is worth noting the use of ceftazidime–avibactam in two cases of infection with MDR carbapenemase oxa-48 producing *K pneumoniae*. None of the patients died due to the NI. Of the patients treated with the immunosuppressant regimen that included basiliximab, 40% developed NI by MDR pathogens in contrast with the group that received the regimen including