Material and methods A before and after ASP intervention was implemented in an oncology department in a tertiary hospital. Pre-intervention prescription characteristics were analysed through repeated point prevalence surveys in the previous year. The intervention was initiated in February 2019 based on a weekly ward round where non-tax advice was given to the oncologists about their active antibiotic prescriptions. Prescription features, rate of adherence to local guidelines and type and acceptance of the recommendations given to stop or de-escalate were recorded.

Results A total of 62 and 73 prescriptions were included in the pre- and post-intervention periods, respectively. Table 1 describes the prescription characteristics in both periods. Adherence to local guidelines was 51% and 59% in the pre- and post-intervention periods, respectively ($p=0.39$).

In the intervention period, 26% of prescriptions were stopped and 12% de-escalated. Acceptance was 99%.

Conclusion and relevance An ASP weekly intervention in the oncology department showed a slight increase in adherence to local antibiotic guidelines. Nevertheless, this improvement was not statistically significant due to the short follow-up period and small sample size. Further studies are required to corroborate this improvement.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-030 INCIDENCE AND RISK FACTORS FOR PROSTHETIC JOINT INFECTION WITHIN 90 DAYS AFTER HEMIARTHROPLASTY FOR FEMORAL NECK FRACTURES IN THE ELDERLY

¹P Declercq*, ¹L Vanden Broeck, ¹L Moons, ¹I Du Bois, ¹D Scherrenberg, ¹I Spriet, ²A Sermon, ²WJ Metsemakers. ¹University Hospitals Leuven, Pharmaceutical and Pharmacological Sciences, Leuven, Belgium; ²University Hospitals Leuven, Department of Traumatology, Leuven, Belgium

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Background and importance Closed femoral neck fractures after low impact trauma in the elderly are often treated with hemiarthroplasty. In this setting, the literature with respect to prosthetic joint infection (PJI) is scarce.

Aim and objectives The objectives of this study were to investigate the incidence of PJI and the impact of the number of perioperative antimicrobial prophylaxis (PAP) administrations. Furthermore, in this population, risk factors for PJI were identified.

Material and methods In this retrospective monocentric study, medical files of elderly (≥ 75 years) trauma patients with closed femoral neck fractures and treated with a hemiarthroplasty, admitted between January 2006 and July 2017, were evaluated. Patient follow-up was 90 days. A Cox proportional hazards regression analysis with forward step was applied. Results were considered statistically significant if $p < 0.05$.

Results A consecutive series of 745 patients (mean age 85 ± 5 years, 221 (29.7%) men) were treated with a hemiarthroplasty. Within 90 postoperative days, 13 (1.7%) patients developed a PJI and 120 (16.1%) died due to reasons other than infection. The applied PAP regimens consisted of intravenous cefazoline or clindamycin. Single and repeated PAP administrations (every 8 hours) were observed. Patients who developed a PJI received a median of 1 (IQR 1–2) PAP administration, which was not significantly different compared with PAP

administrations in patients that did not develop a PJI (1 (IQR 1–3)) (HR=0.236 (95% CI 0.032 – 1.745); $p=0.157$). Higher body weight (HR=1.05 (95% CI 1.008–1.094); $p=0.020$), systemic corticoid use (HR=4.790 (95% CI 1.275–17.997; $p=0.020$) and the need for transfer to the intensive care unit (ICU) for reasons other than infection (HR=8.692 (95% CI 2.353–32.106; $p=0.001$) were independently associated with the development of a PJI within 90 days.

Conclusion and relevance In this fragile trauma population, the observed 1.7% PJI incidence within 90 days was low compared with the incidence rate of 3.4–4.5% in the literature. Our preliminary data showed that the number of PAP administrations did not influence the risk of PJI. Patients with a higher body weight, with systemic corticoid use or with post-operative ICU transfer should be monitored closely for infection.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-031 AUDIT OF ANTIBIOTIC PROPHYLAXIS PRACTICE IN VISCERAL SURGERY IN AN AFRICAN COUNTRY

^{1,2}DA Fiogbe*, ^{1,2}AM Dohou, ^{1,2,3}CL Yehouenou, ^{2,4}FMD Dossou, ^{1,5}F Van Bambeke, ^{1,6}O Dalleur. ¹Louvain Drug Research Institute Ldri-Université Catholique De Louvain Uclouvain, Clinical Pharmacy Research Group Clip, Brussels, Belgium; ²Université D'abomey Calavi Uac, Faculté Des Sciences De La Santé Fss, Cotonou, Benin; ³Centre National Hospitalier Et Universitaire De Pneumo-Phthisiologie De Cotonou, Laboratoire De Référence Des Mycobactéries Lrm, Cotonou, Benin; ⁴Centre Hospitalo-Universitaire Départementale Ouémé Plateau, Chirurgie, Porto-Novo, Benin; ⁵Louvain Drug Research Institute Ldri-Université Catholique De Louvain Uclouvain, Pharmacologie Cellulaire Et Moléculaire, Brussels, Belgium; ⁶Université Catholique De Louvain Uclouvain, Pharmacie-Clinique Universitaire Saint-Luc, Brussels, Belgium

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Background and importance According to the WHO, care associated infections (CAIs) affect at least 2 million patients worldwide annually. In this African country, common CAIs are surgery site infections (SSI; 24.7% among inpatients in the south of the country). To prevent SSIs, appropriate use of antibiotics is essential.

Aim and objectives To audit compliance with international recommendations of antibioprophylaxis practices in visceral surgery.

Material and methods Data were prospectively collected in visceral surgery wards of five hospitals. Compliance with the antibiotic indication (administered when needed and not administered when not required), choice of molecule, dosage, timing of administration and duration were assessed in patients admitted for class 1 or 2 surgery according to Altemeier's classification over 4 months. The international recommendation on antibiotic prophylaxis described by the SFAR (Société Française d'Anesthésie et Réanimation)¹ was considered as a reference. Statistical analysis was performed using SPSS software.

Results A total of 71 interventions were included the study. In 50 cases (70.4%), the administration conformed to the indication criteria (ie, 48 administrations when actually indicated and 2 abstentions when antibioprophylaxis was not required). None (0%) of the 48 patients who received the indicated antibioprophylaxis were administered the recommended molecule. Ceftriaxone was the most widely used molecule (31%). In addition, the initial dose, timing and duration of antibiotic

treatment were in accordance with SFAR standards in 35%, 14% and 21% of cases, respectively.

Conclusion and relevance This study highlights a problem of compliance with recommendations. This can be partly explained by the unavailability of half of the recommended molecules in the local market, the urgent character of the surgery and the lack of knowledge and training of health staff. The overuse of broad spectrum antibiotics reported in other studies may reveal a fear of SSIs by healthcare providers. These data underline the need for implementing an appropriate antibiogram based on local epidemiology and drug availability.

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No conflict of interest.

4CPS-032

ANTIBIOTIC PRESCRIPTION THROUGH MOTIVATED REQUEST: CLINICAL PHARMACY TOOL TO IMPROVE APPROPRIATENESS AND LIMIT RESISTANT BACTERIAL STRAINS. A FOLLOW-UP AFTER A YEAR OF MONITORING IN A LOCAL HOSPITAL

L Gambitta*, S Campbell Davies, E Galfrascoli, E Calzavara, V Curci. *Asst Fatebenefratelli-Sacco-Fatebenefratelli and Ophthalmic Hospital, Hospital Pharmacy Operative Unit, Milan, Italy*

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Background and importance In Italy, antimicrobial resistance is among the highest in Europe. The ECDC 2017 surveillance report confirmed a high percentage of critical bacterial isolates with disturbing antimicrobial resistance characteristics, according to the WHO list of dangerous bacteria: *Klebsiella pneumoniae* resistance to carbapenems close to 28%; *Escherichia coli* with combined resistance (third generation cephalosporins, fluoroquinolones and aminoglycosides) close to 20%; and *Acinetobacter* strains resistance to carbapenems of about 70% in Italy. The hospital pharmacy plays a main role in monitoring antibiotic prescriptions in order to limit resistant bacterial strain selection.

Aim and objectives To describe the pattern of antimicrobial prescribing with motivated request, comparing 2019 data with that of the previous year, to define the future strategy of the intervention.

Material and methods We collected data from antibiotic prescription forms from January to June 2019. We compared data with that of same period in 2018. An Excel database was created. We focused on: length of therapy, type of infection, amount of carbapenems used, resistant bacterial strains and appropriateness of antibiotic choice according to an antibiogram.

Results We collected antibiotic prescriptions for 177 (vs 148 in 2018) patients (58% men). Average age was 62 years. Average length of therapy was 8.4 days (previous year 10.5 days). Prevalent types of infection were: 12% (vs 23% in 2018) urinary tract infections (UTI), 26% (vs 22% in 2018) respiratory tract infections; 14% sepsis (same as 2018) and 13% (vs 10% in 2018) surgical site infections. Concerning critical bacterial strains: in 23% (vs 26% in 2018) of UTI, *E. coli* ESBL+ was

isolated and treated with carbapenems; only 2 (vs 5 in 2018) *Klebsiella* carbapenem resistant strains were found; 0 (vs 1 in the previous year) isolation of *Acinetobacter baumannii* multi-drug resistant was found; and 2 *Pseudomonas aeruginosa* carbapenem resistant strains were found, which required treatment with ceftolozane/tazobactam with clinical benefit. Considering all patients, 62% (vs 54% in 2018) of patients were treated with carbapenems. Antibiograms were available for 25% (41/162) of motivated requests, and 25% (10/41) of these were inappropriate because piperacillin/tazobactam or cephalosporins should have been chosen instead of carbapenems.

Conclusion and relevance Although a slight reduction in critical bacterial strains was observed compared with the previous year and an improvement in average length of therapy, carbapenems usage increased. This was also due to antibiogram misinterpretation. A future objective has to be improvement in the carbapenem sparing strategy, through clinical pharmacist validation of antibiograms and hospital training meetings.

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No conflict of interest.

4CPS-033

OFF-LABEL USE OF NEBULISED AZTREONAM LYSINE IN PATIENTS WITH CHRONIC GRAM NEGATIVE BACTERIAL LUNG COLONISATION

¹S García García*, ¹I Cardona Pascual, ²E Revilla López, ¹M Larrosa García, ¹C Alonso Martínez, ¹J Vidal Otero, ¹C Alerany Pardo, ¹L Cantos Gil, ¹P Granollers Rabal, ¹MR Gomez Domingo, ¹JB Montoro Ronsano. ¹Vall D'hebron University Hospital, Hospital Pharmacy Department, Barcelona, Spain; ²Vall D'hebron University Hospital, Pneumology Department, Barcelona, Spain

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Background and importance Aztreonam lysine inhalation solution (AZLI) is approved for nebulised treatment (nebT) of pulmonary *Pseudomonas aeruginosa* infections in patients with cystic fibrosis (CF). The clinical benefit of nebulised AZLI in non-CF, such as bronchiectasis (BC) or lung transplant (LT) patients with chronic gram negative infection, has not been clearly established.

Aim and objectives To assess the safety and effectiveness of AZLI for nebT in patients with non-CF BC or LT colonised by gram negative chronic bacteria.

Material and methods This was an observational retrospective study in patients with non-CF BC or LT affected by chronic gram negative bacterial infection who started AZLI in 2013–2019. Clinical data were collected from the hospital medical records: hospital admissions, infective bacteria, previous nebT, safety and effectiveness date of AZLI. Mean (SD) respiratory function tests (FVC, FEV₁, FEF_{25–75}) were analysed for each patient, along with AZLI treatment.

To evaluate treatment effects (time=0 vs follow-up data), variance analysis (ANOVA) was applied (SPSS).

Results The study included 15 patients (aged >18 years) previously treated with alternative nebT. Reasons for stopping previous treatment were: tobramycin/colistin intolerance (n=6, 40%), tobramycin/colistin resistance (n=7, 46.7%) and no clinical improvement (n=2, 13.3%). Patients were classified by diagnosis: BC (n=7; 28.6% men) and LT (n=8; 50.0% men). AZLI was administered in 'on/off' cycles in combination with other nebT or in monotherapy (BC, n=1 (14.3%); LT, n=3