

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 antibiotic guide based on local epidemiology and drug availability.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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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

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

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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