Background and importance The introduction of the unit dose (DU) as a drug dispensing system produces a multiplicity of advantages, ranging from prescribing to administering therapies.

Aim and objectives The purpose of this study was to evaluate, through the computerised prescription, the prescriptive appropriateness of antibiotic therapy and the economic impact of a targeted therapy after an antibiogram compared with empirical therapy.

Material and methods The analysis was carried out by extrapolating, from the prescription software and administration in use, the antibiotic prescriptions subjected to a single request motivated (SRM) from 1 January 2019 to 31 December 2019. With the Modulab software, a clinical information management system, prescriptions with antibiograms were verified and divided into appropriate and inappropriate. Prescriptions initiated as empirical therapies were defined as appropriate if the results of the antibiogram confirmed the therapy already started or if the prescriptions changed following the antibiogram. Therapies were considered inappropriate if the antibiogram results were different from the antibiotics used as empirical therapy (resistant/intermediate) or were not tested.

Prescriptions were grouped for empirically prescribed antibiotics and for sensitive antibiotics (as a result of the antibiogram), considering a median duration of therapy. The maximum daily dosage from the technical data sheet was considered for the calculation of the cost of the therapy. Only inappropriate prescriptions were considered in the pharmacoeconomic evaluation.

Results During the study period, total prescriptions of antibiotics with SRM were 2067 of which 1322 (64%) had no antibiogram and 745 (36%) had an antibiogram. The latter were divided into appropriate (63%) and inappropriate (37%). The pharmacoeconomic analysis showed a cost of non-appropriate therapy of 53 950€, with a possible saving of around 49 274€ if the same had been transferred to the sensitive antibiotic resulting from the antibiogram.

Conclusion and relevance We hope, in the future, to directly consult the antibiogram from the computerised prescription to highlight extemporaneously the limitations of long term empirical therapies both for prescriptive appropriateness and for cost savings.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-141 ANALYSIS OF CEFTAROLINE ASSOCIATED NEUTROPENIA

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Background and importance Ceftaroline is a new fifth generation cephalosporin indicated for the treatment of severe pneumonia and skin and soft tissue infection, which is particularly effective against methicillin resistant *Staphylococcus aureus* (MRSA) and penicillin resistant strains of *Streptococcus pneumoniae*. Some studies have found an association between prolonged use of ceftaroline and a higher incidence of neutropenia.

Aim and objectives To study the incidence and causality of the onset of neutropenia associated with the use of ceftaroline in routine clinical practice.

Material and methods A retrospective observational study was conducted in a tertiary hospital between April 2017 and July 2020. Electronic records were used. Inclusion criteria were: adult patients treated with ceftaroline for >7 days. Exclusion criteria were: oncohaematological patients or those with a neutrophil count <1500 cells/mm³ at the beginning of treatment. Demographic variables recorded were: age, gender, Charlson comorbidity index (CCI), length of treatment, admission to the intensive care unit, diagnosis, concomitant antibiotic therapy, bacteria isolated, nadir neutrophil count during treatment, use of granulocyte colony stimulating factor (G-CSF) and clinical evolution. Causality was analysed with the Naranjo adverse drug reaction probability scale.

Results Between April 2017 and July 2020, 41 patients received ceftaroline (69±11 years, 78% men, CCI=6±2). Median length of treatment was 9 days (IQR 8–12.5). 78% of patients were admitted to the intensive care unit and 76% of cases had a diagnosis of pneumonia. Ceftaroline was used as firstline therapy in 54% of patients, frequently associated with levofloxacin (50%). MRSA was isolated from blood cultures in 20% of cases. During ceftaroline treatment, 15% of patients had a nadir count of <1500 neutrophils/mm³ in a median of 6 days (IQR 4–7). 7% of patients had severe neutropenia (<500 cells/mm³). Only one of the neutropenic patients received a dose of G-CSF. In all cases, neutropenia was considered to be ‘possibly’ associated with ceftaroline. None of the patients discontinued their treatment due to neutropenia.

Conclusion and relevance In patients treated with ceftaroline, neutropenia was an adverse effect that must be considered. More studies are needed to confirm this causality.

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Conflict of interest No conflict of interest

5PSQ-142 SAFETY OF AZOLE ANTIFUNGALS IN TRANSPLANTED PATIENTS RECEIVING TACROLIMUS

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Background and importance Potential interaction between tacrolimus and azole antifungals is often detected in transplanted patients with fungal colonisation or infection.

Aim and objectives To compare the influence of voriconazole and isavuconazole on maintenance of plasma levels of tacrolimus and to analyse their safety.

Material and methods A retrospective observational study was conducted according to cluster classification in all patients immunosuppressed with tacrolimus and receiving concomitant treatment with voriconazole or isavuconazole over a 2 year period in a class 5 hospital. The variables collected included age, plasma levels of tacrolimus for 10 days after the start of the combination, and toxicity associated with azole throughout treatment with it. The standard deviation of tacrolimus levels was calculated to determine which of the antifungals had