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ePoster Viewing

Clinical ID: infection in the immunocompromised host and transplant recipients

Retrospective study on the reasons to use micafungin in lung transplantation patients (REMIT)

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Background
Lung transplant recipients present high risk of invasive fungal infections (IFI). Micafungin has been described as a new echinocandin with promising results in prophylaxis and treatment of IFI.

Obejctive
To aim the use of micafungin in prophylaxis or treatment of IFI in critically ill lung transplant recipients(LTR) admitted to intensive care unit (ICU). Another objective is to evaluate indications, time of treatment, complications and outcomes.

Methods
Multicentric retrospective study on all LTR admitted to ICU during 2012, 2013 and to six first months of 2014, who received prophylaxis or treatment with micafungin. Recorded data include demographics, diagnostic category, along with acute and underlying conditions. For statistical analysis, Pearson´s chi-squared, Fisher and Mann-Whitney U tests have been used. Data are expressed as frequency (percentage) or median (25th-75th inter-quartile range).

Results
During study period were included 35 lung transplant recipients treated with micafungin (57.1% male; median age 56 years old (46-61); APACHE II 22 (17-24) and SOFA 7 (6-9)) . Main indication for lung transplantation was chronic obstructive pulmonary disease (42.91%) followed by pulmonary fibrosis (28.6%). Bilateral lung transplants were performed in 68.6.9%, unilateral lung right side transplants in 22.9% and left side in 8.6% of the cases. Almost all patients were treated with corticoid therapy (80%), receiving antibiotic treatment during seven days or more in 68.6% of the cases, and only two patients (5.7%) presented absolute neutrophil count < 500/mm3.

Micafungin was used as prophylaxis in 11 patients (31.4%), as directed therapy in 4 patients (11.4%), as empirical treatment in 2 cases (5.7%) and as pre-emptive in 15 patients (42.9%). Main etiological agent was aspergillus spp (54.5%), and lung was the main site of infection (74.3%). Median days of antifungal administration were 14 (IQR 8-29) and no complications were described. Most of the patients received prophylaxis with nebulized desoxycholate amphotericin. Additionally, 15 patients were previously treated with azoles (6 cases (25%) in bilateral transplant recipients and 9 (81.8%) in unilateral graft (p=0.003)). Only two patients received micafungin over 100 mg daily. Microbiological evolution was successful in 100% of prophylaxis group, compared to 87.5% in the treatment group.

During ICU stay, almost all patients required vasopressors drugs and mechanical ventilation but only four (11.4%) required continuous renal replacement therapy

Neither therapies received in ICU, nor anti-fungal treatment indication was related to ICU outcomes.

ICU LOS 30 (12-67) days and overall mortality rate was 25.7%. Only one case was related to IFI.

Conclusions
Use of micafungin as prophylaxis or treatment of IFI in lung transplant recipients was effective and safe. Microbiological evolution was favorable in all patients with micafungin prophylaxis.

Network PLUTO (Postoperative**Lung** Transplantantation). Granted by Astellas.