O1121 Adherence to guidelines and related mortality when using antifungal drugs for invasive aspergillosis in patients with haematologic malignancies and/or stem cell transplantation

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Background: In neutropenic patients with HMs and/or SCT, invasive fungal infections (IFIs) are significant causes of mortality among which invasive aspergillosis (IA) is the most common IFI. We investigated the usage of antifungals for the treatment of IA and adherence to the two widely-used international guidelines (i.e. IDSA and ECIL) on antifungal therapy and compared the mortality rates.

Materials/methods: A total of 337 patients (390 episodes) with AL and/or SCT were retrospectively evaluated between January 2008 and October 2018. All episodes of IA were classified as proven, probable and possible according to EORTC/MSG 2008 criteria. Usage of antifungals were grouped as empirical, pre-emptive and targeted. All episodes were classified as ‘concordant’ and ‘discordant’ for antifungal agents used according to IDSA 2008, 2010, 2016 and ECIL 2009, 2013, 2015 guidelines, whenever the time of episode is applicable. Categorical and continuous data were compared with Chi-square and Mann Whitney U tests, respectively. Survival and log rank analyses were performed by Kaplan-Meier method. Statistical significance was set at a p value of <0.05.

Results: 73.1% patients had acute leukemia and in 22.6% of all episodes allo-SCT was performed. Per EORTC/MSG diagnostic criteria, 74.1% of episodes would fall in ‘possible IFI’, 19.5% ‘probable’ and 6.4% ‘proven’ category. Antifungals were given as preemptively in 57.7%, empirically in 35.8% and as targeted therapy in 6.5% of episodes. The primary antifungals used (in % episodes) were voriconazole (46.4%), caspofungin (32.8%), liposomal amphotericin B (12.6%) and amphotericin B deoxycholate (8.2%). In 76.7% of all episodes, antifungal usage was concordant with at least one of the two guidelines for which adherence was evaluated. Nevertheless, no statistical significance was found in 30-day mortality in episodes with or without guidelines adherence (p=0.411). Survival at the end of the first year after antifungal therapy was 59.7% and 58.3% in those with or without guidelines adherence, respectively (p = 0.593) (Figure).

Conclusions: Our results indicate that the adherence to either IDSA or ECIL guidelines for IA in patients with HMs and/or SCT is relatively high in our center. However, no mortality difference was detected between concordant or discordant episodes.