

**P0650 Current epidemiology of infections in febrile neutropenia episodes from a large cohort of haematological patients**

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**Background:** The aim of our study is to describe the current incidence and epidemiology of proven infections diagnosed in this era of improved microbiological tests in a cohort of hematological patients with high-risk febrile neutropenia (HRFN).

**Materials/methods:** A large set of structured data from hematological patients with HRFN were extracted directly from data stored in electronic health records (January 2008-December 2017) at a tertiary hospital in Barcelona (110 HSCT and 60 acute leukemia intensive chemotherapy per year). We perform a descriptive analysis of the infections with positive microbiological results.

**Results:** A total of 1539 patients had 3235 episodes of HRFN and 846 (26%) had a related positive microbiological result. Bacterial infection was the most common infection (649 [20%] episodes). Bacteremia was diagnosed in 414 (13%) episodes, mainly caused by CoNS (211, 6.5%), *E. coli* (66, 2%), *Enterococcus* spp. (63, 2%), *Pseudomonas aeruginosa* (PA) (50, 1.5%) and *K. pneumoniae* (16, 0.5%). Urinary and respiratory-confirmed bacterial infections were diagnosed in 120 (4%) and 94 (3%) episodes, respectively, and were mainly caused by PA (62, 2%), *Enterococcus* spp. (53, 2%) and *E. coli* (49, 1.5%). Among all isolates, 108 (13%) were multidrug-resistant (MDR); 52 (6%) MDR-PA, 27 (3%) *E. coli* and 16 (2%) *K. pneumoniae* ESBL-producers. *Clostridium difficile* infection was diagnosed in 24 (1%) episodes. Regarding non-bacterial pathogens, 274 (8.5%) episodes had positive microbiological results. Fungal infections were diagnosed in 162 (5%) episodes: 138 (4%) invasive aspergillosis - 126 positive galactomannan, 11 positive cultures and 1 with both-, 19 (0.6%) candidemias -mainly by non-albicans species (13, 0.4%)-, 1 cryptococcosis, 1 pneumocystosis, 1 *Alternaria alternata*, 1 *Fusarium* spp. and 1 *Penicillium* spp. Viral infections were diagnosed in 146 (4.5%) episodes: Cytomegalovirus (59, 2%), Influenza (24, 1%), Herpes simplex 1 (13, 0.4%) and Epstein Barr (13, 0.4%) were the most frequently detected viruses. There were 4 (0.1%) parasitic infections: 2 toxoplasmosis and 2 cryptosporidiosis.

**Conclusions:** Among 3235 HRFN episodes, 26% had documented infections with positive microbiological results. The most common infections were bacteremias (13%). MDR bacterial infections were documented in 13% of episodes. Fungal and viral infections occurred in 5% and 4.5% HRFN episodes, respectively.