

P0679 Risk factors for 30-day mortality in haematopoietic stem cell transplant recipients with bloodstream infection: a 25-year experience in a university hospital

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Background: We aimed to describe the epidemiology changes in bloodstream infections (BSI) in hematopoietic stem cell transplant (HSCT) recipients throughout the 25-year experience of our HSCT program.

Materials/methods: All episodes of BSI in patients with HSCT were prospectively collected (1992-2016). We describe the changing epidemiology comparing five-year time spans.

Results: 1115 episodes of BSI were documented in 788 patients who underwent HSCT (73% allogenic and 27% autologous). Mean age was 43 years (IQR 31-52) and 674 (60%) were males. Most had prior acute leukemia (29%) and non-Hodgkin lymphoma (18%). The most frequent sources of infection were catheter (46%) and unknown/endogenous (42%). Most important epidemiologic changes over time are detailed in table 1. We identified 114 (10%) multidrug-resistant (MDR) microorganisms (22% among Gram negative bacteria [GNB]). A significant decrease in Gram positive (GP) microorganisms (from 71% to 50%, $p=0.001$) and an increase in GNB (from 32% to 47%, $p=0.018$) and in MDR strains ($p<.001$) were documented.

Conclusions: Our study showed marked changes in BSI in patients with HSCT over the study period. A significant decrease in GP and increase in MDR-GNB were documented. These changes must be taken into account to determine potential prophylaxis therapy and antibiotic empirical treatments.

Table 1. Changes over time in epidemiology of BSI in HSCT recipients.

	1992-1996 N=235 (%)	1997-2001 N=352 (%)	2002-2006 N=129 (%)	2007-2011 N=219 (%)	2012-2016 N=180 (%)	p-value for trend
CoNS	128 (54.5)	156 (44.3)	57 (44.2)	81 (37)	50 (27.8)	<0.001
<i>E. coli</i>	19 (8.1)	34 (9.7)	20 (15.5)	27 (12.3)	30 (16.7)	0.031
ESBL*	1 (5.3)	0 (0)	1 (5)	7 (25.9)	11 (36.7)	<0.001
<i>Pseudomonas spp</i>	18 (7.7)	36 (10.2)	11 (8.5)	40 (18.3)	33 (18.3)	<0.001
MDR*	1 (5.6)	2 (5.6)	1 (9.1)	18 (45)	14 (42.4)	<0.001
Carbapenem-resistant*	0 (0)	1 (2.8)	1 (9.1)	17 (42.5)	16 (48.5)	<0.001

<i>Klebsiella</i> spp	3 (1.3)	12 (3.4)	9 (7)	14 (6.4)	8 (4.4)	0.029
MDR*	0 (0)	0 (0)	4 (44.4)	1 (7.1)	0 (0)	<0.001
BSI caused by MDR-GNB	11 (4.7)	15 (4.3)	9 (7)	33 (15.1)	28 (15.6)	<0.001

*Percentage among their specie.