

P0360

Paper Poster Session

Fungal infection epidemiology

Invasive mycoses (IM) in patients (pts) with hematopoietic stem cell transplant (HSCT): RIFI study

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Background: The objective of this study was to estimate the rate of IM among HSCT pts.

Material/methods: Multicenter prospective observational study of invasive fungal infections (RIFI - NCT01519648) was performed between February 2012 and March 2014. All pts were followed up for 6 months. IM in allo HSCT were analyzed in the period of pre-engraftment and engraftment.

Results: A total of 808 pts were included in RIFI study of which 306 were HSCT pts from 10 hematological centers in Russia (168 autologous (auto) HSCT, 138 allogeneic (allo) HSCT). The median age was 45 (2-66) years in auto HSCT (< 18 years in 19 (11%) pts); 29 (1-59) years in allo HSCT (age < 18 years in 25 (18%) pts). Main underlying diseases in auto HSCT were multiple myeloma (53%) and Hodgkin lymphoma (20.2%), in allo HSCT – acute myeloid leukemia (49%) and acute lymphoblastic leukemia (25%). IM before allo HSCT and auto HSCT had 21% pts (29, invasive aspergillosis (IA) 25 pts) and 2% (3, IA) respectively. The time interval between the diagnosis of IA and allo HSCT was 4.5 (1-38.4) months. Graft versus host disease was diagnosed in 71 (51.5%) allo HSCT pts. Cumulative incidence (6 month) of IM in allo HSCT and auto HSCT are presented in the table. Risk factors of IA in engraftment period in allo HSCT were treatment with steroids (p=0.006) with dose > 1 mg/kg (p=0.01).

Conclusions: The rate of IM was 4.2% in auto HSCT and 14.5% in allo HSCT. IM in allo HSCT prevailed in the period of engraftment (12.8%) and were caused mainly by IA (10.3%).

Table. Cumulative incidence (6 month) of IM in allo HSCT and auto HSCT pts

IM	Allo HSCT n=138			Auto HSCT N=168
	Pre-engraftment N=138	Engraftment N=117	Total N=138	
IA	4 (2.9%)	12 (10.3%)	16 (11.6%)	7 (4.2%)
	p=0,02, OR 3.83, 95% CI 1.2-12.2		p=0,01, OR 3, 95% CI 1.2-7.6	
- Proven	-	-	-	-
- Probable	4	10	14	4
- Possible	-	2	2	3
Other molds	-	1 (0.8%) Fusarium spp	1 (0.7%) Fusarium spp	-
Yeasts	1 (0.7%)	2 (1.7%)	3 (2.2%)	-
Total	5 (3.6%)	15 (12.8%)	20 (14.5%)	7 (4.2%)
	p=0.006, OR 2.73, 95% CI 0.97-7.76		p=0,002, OR 3.9, 95% CI 1.6-9.5	