P0056
Poster Session I
Confronting fungal infections

CANDIDEMIA IN PATIENTS WITH HEMATOLOGICAL MALIGNANCIES: EPIDEMIOLOGY AND OUTCOME

G. Klyasova[1], E. Blokhina[1], A. Gracheva[1], S. Kravchenko[2], E. Parovichnikova[3], G. Galstyan[4], V. Okhmat[1]

[1]Clinical microbiology mycology and antimicrobial therapy, National Research Center for Haematology, Moscow , Russia ; [2]Hematological malignancies, National Research Center for Haematology, Moscow , Russia ; [3]Hematological malignancies and BMT, National Research Center for Haematology, Moscow , Russia ; [4]Intensive care, National Research Center for Haematology, Moscow , Russia

Objectives. To analyze etiology, risk factors and outcome of candidemia in patients with hematological malignancies.

Methods. The prospective study w as conducted from January, 2006 to November, 2013. Clinical, microbiological results and outcome (according to EORTC/MSG criteria 2008) were analyzed. Mortality w as estimated w ithin 30 day from *Candida* spp. isolation from blood.

Results. Over 8-year period, 54 patients with candidemia w ere enrolled (31 male/ 23 female, median age 50 years (17-77). Main underlying conditions w ere non Hodgkin's lympoma (46%) and acute leukemia (28%). At the time of diagnosis of candidemia 69% of patients w ere neutropenic, 26% in complete remission and 28% w ith *de novo* hematological malignancies. 32% of patients developed candidemia w hile receiving antifungal agents. Species distribution was as follows C. *albicans* 37%, C. *parapsilosis* 15%, C. *krusei* 11%, C. *guilliermondii* 11%, C. *lusitaniae* 6%, C. *glabrata* 6%, C. *tropicalis* 6%, C. *famata* 3%, C. *pelliculosa* 3%, C. *kefyr* 2%. Risk factors for candidemia were the use of central venous catheter (CVC) (96%), *Candida* colonization (89%), chemotherapy (85%), the use of antibiotics (89%) and corticosteroids (65%). Concomitant infection was in 36 (67%) patients. The antifungal agents were administered to 49 (91%) patients. The antifungal agents used in initial treatment w ere amphotericin B (38%), fluconazole (29%), caspofungin (21%), anidulafungin (4%), micafungin (4%), voriconazole (2%), itraconazole (2%). Five patients (9%) received no antifungal therapy (one patients died on first day of *Candida* spp. isolation from blood, 4 patients had regression of clinical signs of infection after the removal of CVC. The overall 30-day mortality rate w as 44% and the attributable mortality rate w as 17%. Survival (30 days) w as 86,7% w ith echinocandin on the first line of treatment and 27,8% with amphotericin B as a first line drug (p=0.001).
Factors significantly associated w ith clinical response in hematological patients w ith candidemia

Factors	Clinical response according to presence or absence of analyzing factor n (%)		p
	Yes	No	
Echinocandin - first line drug	12/14 (86)	14/35 (40)	0.005
Remission of hematological malignancies	11/14 (79)	19/40 (48)	0.05
CVC removal	29/44 (66)	1/8 (13)	0.007
CVC removal on first day of positive *Candida* blood culture	25/33 (76)	4/11 (36)	0.02
Antifungal administration on first day of positive *Candida* blood culture	25/42 (60)	1/7 (14)	0.003
Septic shock, ICU admission	4/25 (16)	26/29 (90)	<0.0001
Duration of neutropenia > 20 days	2/15 (13)	28/39 (72)	0.0001
Amphotericin B - first line drug	5/19 (26)	21/30 (70)	0.004

Conclusions. Overall mortality of candidemia in patients with hematological malignancies remains high. The outcome of candidemia in patients w ith hematological malignancies may be improved by the early use of echinocandin on the first line of treatment and the removal of CVC.