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Abstract (poster session)

Prospective registry of invasive fungal diseases in acute myeloid leukaemia: preliminary results on 142 cases

M. Caira*, A. Candoni, A. Busca, M. Delia, C. Caramatti, C. Cattaneo, L. Melillo, M.E. Mitra, L. Paris, L. Potenza, G. Leone, A. Nosari, F. Aversa, L. Pagano on behalf of the SEIFEM group

Objectives: To evaluate epidemiological characteristics, treatments and outcome of invasive fungal diseases (IFDs) in acute myeloid leukemia patients (AMLs). Methods: From January 2010 to March 2011, 31 Italian participating centers registered all consecutive cases of IFDs in adult AMLs at first induction (until 30th day from the end of chmotherapy). The parameters we analyzed were: age, sex, severity and duration of neutropenia, antifungal prophylaxis, certainty of IFD diagnosis, empirical/pre-emptive therapy, target therapy, etiologic agent, outcome. Response rate to antifungal therapy and mortality rate were thus analyzed. Results: over a 15 month period, 142 IFDs were collected in 593 newly diagnosed AMLs (incidence 23.6%). Median age was 60 (range 18-81), with a male/female ratio of 1.6/1. The most part of IFDs (128, 90%) occurred in pts who had received conventional chemotherapy (128/498, incidence 25.7%). As expected, IFDs incidence was lower in those receiving either supportive or low dose therapy (14/95, 14.7%). Probable and proven IFDs were 37 and 14, respectively; remaining cases were classified as possible IFDs (91, 64%). A deep neutropenia (PMN count <500/µl) lasting for at least 7 days occurred in 129 of them (91%). Antifungal approaches are reported in the table. Most of pts had received systemic antifungal prophylaxis (120/142, 85%), more frequently with posaconazole. Liposomal AmB and caspofungin were the most frequently employed drugs, as empirical/pre-emptive therapies. Of 51 proven/probable IFDs, the majority were mold infections (36, 69%), with a mold/yeast ratio of 2.4/1. Among molds, aspergillosis (IA) were predominant (27, 75%). Four cases of rare fungal agents were identified (1 Fusarium, 1 Blastoschizomices, 1 Geotrichum and 1 Trichosporon). At 30th day, 104 pts had achieved a favourable response; the overall response rate was 73%. IFD-attributable mortality rate (AMR) was 11.3%, ranging from 5.5% for possible to 21.6% for proven/probable cases. Conclusions: IFDs continue to be a challenging complication in high risk patients. Our results confirm the recently reported trend in reduction of IFD-AMR. On the contrary, cases with unidentified origin continue to be the most frequent. This datum makes it necessary to improve our diagnostic work-up to better target treatment and preventive strategies, and to reduce the risk of overtreatment.

	ALL CASES (142)	Possible IFDs	Proven/probable IFDs		
		Nº cases (91)	Nº cases (51)	Molds (36)	Yeasts (15)
Systemic antifungal prophylaxis	**120 (85%)**	78	**42 (82%)**	30	
➢ Administered	**22 (15%)**	13	**9 (18%)**	6	12
➢ Not administered					3
Prophylactic systemic drug					
➢ Itraconazole	**34 (28%)**	22	**12 (29%)**	9	3
➢ Fluconazole	**28 (23%)**	14	**14 (33%)**	9	5
➢ Posaconazole	**55 (46%)**	40	**15 (36%)**	12	3
➢ Other	**3**	2	**1 (2%)**	0	1
Empirical/pre-emptive					
➢ Performed	**124**	85	**39 (76%)**	31	8
➢ Not performed	**18**	6	**12 (24%)**	5	7
Empirical/pre-emptive drug [1]					
➢ Caspofungin	**25 (24%)**	17	**8 (23%)**	6	2
➢ L-AmB	**51 (48%)**	37	**16 (46%)**	11	5
➢ Voriconazole	**17 (16%)**	8	**8 (23%)**	7	1
➢ Abelcet	**8 (7.5%)**	7	**1 (3%)**	1	0
➢ Other	**5 (4%)**	3	**2 (5%)**	1	0
Drug in 1° line target therapy [2]					
➢ L-AmB			**11 (27%)**	8	3
➢ Caspofungin			**5 (14%)**	0	5
➢ Voriconazole			**20 (48%)**	17	3
➢ Combined			**3 (7%)**	0	3
➢ Other			**2 (5%)**	1	1
Favourable responses (RR)	**104 (73%)**	72 (79%)	**32 (63%)**	25 (69%)	7 (47%)
IFD attributable deaths (AMR)	**16 (11.3%)**	5 (5.5%)	**11 (21.6%)**	5 (13.9%)	6 (40%)

Table: antifungal treatments and outcome of possible and proven/probable IFDs registered among 593 AMLs

Legend: RR: response rate; AMR: attributable mortality rate; L-AmB: liposomal amphotericin B.

[1] data available for 106 of 123 cases and for 35 of 39 proven/probable cases

[2] Data applicable to proven/probable cases only; 10 patients excluded [3 with incomplete data and 7 for early death (while on empirical/pre-emptive)].