

## P083

**FUNGAL INFECTIONS IN HEMATOLOGICAL MALIGNANCIES: SEIFEM-2004 STUDY (SORVEGLIANZA EPIDEMIOLOGICA INFEZIONI FUNGINE NELLE EMOPATIE MALIGNE)**

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**Background/Aims.** To evaluate the incidence and the outcome of fungal infections in patients affected by hematological malignancies (HM) and admitted in Italian centres. **Methods.** A retrospective study, conducted over 1999-2003, in HM patients, admitted in 18 hematology divisions in tertiary cares or university hospitals, who developed fungal infections.

**Results.** Our population included 11,802 patients: 3,012 with AML (25.5%), 1,173 with ALL (9.9%), 596 with CML (5%), 1,104 with CLL (9.4%), 1,616 with MM (13.7%), 3,457 with NHL (29.3%), 844 with HL (7.2%). Patients who underwent autologous or allogeneic HSCT were included in a specific different analysis. A proven or probable fungal infection occurred in 538 patients, with an incidence of 4.6%; in particular we registered 346 episodes sustained by moulds (2.9%) and 193 by yeasts (1.6%). The incidence rate depends upon underlying malignancy (12.3% in AML, 6.5% in LLA, 2.7% in CML, 0.6% in CLL, 0.5% in MM, 1.6% in NHL, 0.9% in HL). Among moulds, the detected etiological agents were *Aspergillus* spp (310 episodes, 2.6%), *Mucorales* spp (14 episodes, 0.1%), *Fusarium* spp (15 episodes, 0.1%), and other rare fungi (7 episodes, 0.1%). Among yeasts we registered only septicemia sustained by *Candida* spp (175 patients, incidence 1.4%). Other yeast infections were caused by *Cryptococcus* spp (8 pts, incidence 0.1%), *Trichosporon* spp (7 pts, 0.1%) and other rare agents (2 pts). As for aspergillosis, the identification of the specific subtype of agent was possible only in the 108 cases (35%); *A. fumigatus* was identified in cases (15%), *A. flavus* in (12%), *A. terreus* in (5%), *A. niger* in (2%). It is worth noting that the number of infections caused by *A. flavus* increased from 1999 (5 pts, 8.8% of the total cases of aspergillosis registered during the year) to 2003 (14 pts, 18.4%); relative risk was about 2.10 (IC95% 0.8-5.49; *p*-value 0.117). Conversely all other subtypes showed a stable incidence. The lethality rate registered in the population was about 39%, with differences between aspergillosis (42%) and candidemia (33%). In particular the lethality due to aspergillosis ranged from 40% in 1999 to 45% in 2003 without significant variation (RR 1.11; IC95% 0.74-1.66; *p*-value 0.613), as well as the lethality in patients affected by candidemia not significantly increased from 30% in 1999 to 37.5% in 2003 (RR 1.25; IC95% 0.67-2.32;

*p*-value 0.473).

**Summary/conclusions.** Our study confirms the general trend already described for hematological patients: infections due to moulds continue to be more frequent than those caused by yeast. Among all fungi, *Aspergillus* spp remains the main etiologic agent. AML represents the most frequently involved category. The mortality rate is actually about 40%, with a remarkable decrease when compared to past years.

## P083a

**EPIDEMIOLOGY OF FUNGAL INFECTIONS IN HEMATOLOGICAL STEM CELLS TRANSPLANTED PATIENTS: SEIFEM 2004 STUDY**

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**Background/Aims.** To evaluate the epidemiology and the outcome of fungal complications in patients who underwent autologous or allogeneic hemopoietic stem cells transplantation (HSCT) and admitted in multiple Italian centres.

**Methods.** A retrospective study, conducted over 1999-2003, in bone marrow transplant recipients, admitted in 13 hematology divisions in tertiary cares or university hospitals, who developed fungal infections.

**Results.** we evaluated 4,139 patients who underwent HSCT: 1,505 (36.4%) allogeneic and 2,634 (63.6%) autologous transplant recipients (TR). A fungal infection occurred in 78 patients, with an incidence of 1.9%; in particular we registered 59 episodes sustained by moulds (incidence 1.4%) and 19 by yeasts (incidence 0.5%). The incidence rate depends upon the type of transplant (3.8% in allogeneic HSCT, 0.8% in autologous HSCT). Among moulds, the detected specific etiological agents were *Aspergillus* spp in 58 episodes. Among yeasts, we registered 19 episodes caused by *Candida* spp. As for aspergillosis, the identification of the specific subtype was possible only in the 31% of cases; *A. fumigatus* was identified in the 6 cases (10.4%), *A. flavus* in 2 (3.4%), *A. terreus* in 7 (12%), *A. niger* in 3 (5.2%). The mortality registered in our population was about 64%, with differences between allogeneic TR (56%) and autologous TR (7.7%). The etiologic agent also influenced the patients outcome: the mean mortality rate due to *Aspergillus* spp was about 69% (78% in allogeneic TR and 12.5% in autologous TR), while that one due to *Candida* spp was about 47.4% (66% in allogeneic TR and 38.5% in autologous TR).

**Summary/Conclusions.** Among HSCT recipients, fungal infections represent a common complication, in particular in patients undergoing allogeneic transplantation. *Aspergillus* spp is the most frequent agent detected in our