O0568 Invasive pulmonary aspergillosis in patients with haematological malignancies: 272 episodes in 18 years

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**Background:** To evaluate risk factors, diagnostic procedures and treatment outcome of IPA in patients with HM.

**Materials/methods:** Prospective study included cases of proven/probable IPA that were identified at National Research Center for Hematology (2000-2017). Episodes of IPA were defined according to EORTC/MSG criteria (2008). A cut-off value of galactomannan (GM)≥1.0 in bronchoalveolar lavage (BAL) fluid were considered positive.

**Results:** We identified 272 episodes (8 proven, 264 probable) of IPA in 267 patients for 18 years (male 157, female – 110, median age 44(17-81). Relapse of IPA had 6(2%) patients. The main underlying diseases were acute leukemia (48.5%), 32% induction and 19% consolidation phase of chemotherapy, 15% allogeneic HSCT. Dissemination of IPA occurred in 29(10%) cases; neutropenia was in 71%; temperature <37.5°C was observed in 19.5%. BAL was performed in 82%. Mycology positive tests were as follows Aspergillus spp. in 47%, GM in 82% (45% in serum, 23% in BAL, 14% serum and BAL). Aspergillus fumigatus represented 36.4% (n=47) isolates, followed by A. flavus 22.5% (n=29), A. niger 8.6% (n=11) and 32% Aspergillus belonged to other species. Concomitant infections were identified in 57% episodes, of them prevailed bacteremia (50.5%) and Pneumocystis jirovecii pneumonia (23%). The most common abnormalities on CT during neutropenia were nodules (54%), without neutropenia – non - specific infiltrates (56%) especially in allogeneic recipients. Targeted antifungal therapy for IPA was administered in 267 (98%) episodes. Voriconazole was used in 69% (n=186) IPA on first line therapy, of them only 2% (n=6) in combination with echinocandins. Only one line of therapy was used in 190 (71%) episodes, a second line therapy due to toxicity or failure of the previous therapy in 77 (29%). On second line therapy combination with echinocandins was in 21% episodes. Twelve-week overall survival was 54%; it was 62% when first-line therapy included voriconazole and 41.9% otherwise (p<0.001)

**Conclusions:** IPA in hematological practice occurred more frequently in patients with acute leukemia (48.5%) and neutropenia (71%). There were some particulars in IPA episodes such as registration in consolidation (19%), presence of temperature <37.5 (19.5%), detection of Aspergillus (32%) not belonging to common species, concomitant infections (57%).