1463. Immune Reconstitution Inflammatory Syndrome (IRIS) in Neutropenic Patients with Invasive Pulmonary Aspergillosis (IPA) during Neutrophil Recovery

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Background. Limited data on the incidence and clinical characteristics of IRIS in neutropenic patients with IPA were available.

Methods. During 6-year period, adult patients with neutropenia who met probable or proven IPA by the EORTC criteria were retrospectively enrolled. IRIS was defined as new appearance or worsening of radiologic pulmonary findings temporally related to neutrophil recovery with evidence of a decrease 50% in serum galactomannan index titers.

Results. Of 150 patients, 35 (23%, 95% CI 17% - 31%) developed IRIS during neutrophil recovery. IRIS was associated with shorter neutropenic period, controlled underlying hematologic disease, less immunosuppressant use, and voriconazole use (table). The 30- and 90-day mortalities were lower in patients with IRIS than those with non-IRIS (table). In the subgroup analysis of 53 patients who had progressive disease during the neutrophil recovery, 35 (66%, 95% CI 53% -77%) were classified as IRIS group. The 30- and 90-day mortalities was higher in patients with non-IRIS who had progressive disease during the neutrophil recovery than in those with IRIS (9% vs 39%, $P = 0.02$ and 31% vs 72%, $P = 0.005$, respectively).

Clinical characteristics and outcomes of neutropenic patients with and without immune reconstitution inflammatory syndrome following initiation of antifungal therapy for invasvie pulmonary aspergillosis

	IRIS (n=35)	Non-IRIS (n=115)	P

	IRIS (n=35)	Non-IRIS (n=115)	P
Age, median years (IQR)	55 (46-64)	52 (41-61)	0.39
Male gender	24 (68.6)	70 (60.9)	0.41
Underlying disease/conditions			
Acute leukemia	28 (80)	87 (76)	0.59
Aplastic anemia	1 (3)	12 (10)	0.30
Lymphoma	2 (6)	8 (7)	>0.99
Receipt of HCT	9 (26)	42 (35)	0.24
Prior corticosteroid use	7 (20)	39 (34)	0.12
Prior immunosuppressant use	3 (9)	30 (26)	0.03
Controlled state of underlying disease	11 (31)	18 (16)	0.04
Length of neutropenic period, median days (IQR)	29 (19-50)	40 (23-87)	0.04
Peak galactomannan index, median value (IQR)	1.4 (0.7-3.4)	1.5 (0.7-3.6)	0.86
Antifungal therapy on diagnosis day of IPA			
Amphotericin B	17 (49)	69 (60)	0.23
Voriconazole	15 (43)	29 (25)	0.045
Outcome after diagnosis of IPA			
30-day mortality	3 (9)	38 (33)	0.004
90-day mortality	11 (31)	67 (58)	0.005

Conclusion. IRIS occured in about one quarter of neutropenic patients with IPA, was associated with voriconazole use. In addition, it appears to be a good prognostic factor.

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