

中文題目：血液惡性腫瘤病患肺部侵襲性黴菌感染的臨床特徵與治療結果

英文題目：Clinical characteristics and treatment outcomes of pulmonary invasive fungal infection among patients with haematological malignancy in a medical centre in Taiwan, 2008-2013

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**Objective:** To investigate clinical characteristics and treatment outcomes of pulmonary invasive fungal infection (IFI) in patients with haematological malignancy.

**Methods:** All patients with haematological malignancy who were treated at National Taiwan University Hospital from 2008 to 2013 were evaluated. Pulmonary IFI was classified according to the European Organization for Research and Treatment of Cancer 2008 consensus.

**Results:** During the study period, 236 (11.3%) of 2,083 patients with haematological malignancy were diagnosed as pulmonary IFI, including 41 (17.4%) proven, 75 (31.8%) probable, and 120 (50.8%) possible cases. Among the 116 patients of proven and probable cases of pulmonary IFI, these patients included 90 (77.6%) with aspergillosis alone, 9 (7.8%) with cryptococcosis alone, 4 (3.4%) with mucormycosis, 2 (1.7%) with fusariosis alone, and 9 (7.8%) with other mould infections. Two patients had dual IFI including one with aspergillosis and fusariosis, and another one with aspergillosis and cryptococcosis. The overall incidence of patients with pulmonary IFI was 5.9 per 100 patient-years. The highest incidence (per 100 patient-year) was found in patients with acute myeloid leukaemia (13.7) followed by acute lymphoblastic leukaemia (11.3) and myelodysplastic syndrome/aplastic anaemia (6.7). Fourteen (5.9%) of the 236 patients with pulmonary IFI died within 12 weeks after diagnosis of pulmonary IFI. Univariate analysis revealed that elderly age (>65 years) ( $P=0.034$ ), lack of response to anti-fungal treatment ( $P<0.001$ ), and admission to the intensive care unit (ICU) ( $P<0.001$ ) were predictors of poor prognosis. Patients receiving allogeneic transplantation had better 12-week mortality ( $P=0.037$ ). However, only admission to the ICU was an independent predictor of poor prognosis for 12-week mortality ( $P=0.022$ ; odds ratio: 0.170) based on multivariate analysis.

**Conclusions:** Patients with acute leukaemia and myelodysplastic syndrome/severe aplastic anaemia were at high risk of pulmonary IFI. Aspergillosis was the most common pulmonary IFI, followed by cryptococcosis, mucormycosis, and fusariosis.

**Keywords:** Pulmonary invasive fungal infection, haematological malignancy, aspergillosis, cryptococcosis, treatment outcomes.