

O1048 NOCARDIP: a nationwide retrospective study and literature review of nocardiosis associated with primary immunodeficiencies

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Background: Nocardiosis is a life-threatening opportunistic bacterial infection that may affect patients with primary immunodeficiency diseases (PID). We aimed to describe clinical manifestations, treatment features and outcomes of nocardiosis in patients with PID.

Materials/methods: PI This international retrospective study included all patients with documented PID and nocardiosis diagnosed and/or published from the 1st of January 2000 to the 31st of December 2016. To identify cases, we analysed database from Centre de référence des déficits immunitaires héréditaires (Hôpital Necker-Enfants malades, Paris, France), and we made an e-mail request to all french infectiologists. We also performed a literature review on Pubmed.

Results: Seventy-nine cases of nocardiosis associated with PID were included, including 12 French patients and 67 published cases. Men:women ratio was 1: 1.9. Median age at diagnosis of nocardiosis was 16 [0.3-54] years. Main PID were Chronic Granulomatous Disease (CGD, n = 61, 77.5%), Idiopathic CD4 Lymphopenia (n = 4, 5%), Common Variable Immunodeficiency (n = 4, 5%), IL12Rβ1 deficiency (n = 4), IL12p40 deficiency (n = 2, 2.5%), and Severe Combined Immunodeficiency (n = 2, 2.5%). Median time from onset of symptoms and diagnosis of *Nocardia* infection was 60 days [2-257]. Nocardiosis was disseminated in 25% of cases (n = 12/52). Most frequent clinical presentation was pulmonary disease (89%, n = 46/52), followed by central nervous system (CNS) nocardiosis (19%, 10/52), and skin/soft-tissue infection (14%, n = 7/52).

Nocardia species was determined in 65% of cases (n = 36/55), including 36% of *Nocardia farcinica* (n = 13/36). Co-infection occurred in 36% of cases (n = 18/50). The median duration of antibiotic therapy was 191 days [35-852], and 30% of patients had associated surgical intervention (n = 14/47). The mortality rate was 10% (n = 5/52) at 12 months from nocardiosis diagnosis, and 13% of patients underwent two episodes of nocardiosis (n = 6/46).

Conclusions: In the largest series of nocardiosis associated with PID including 79 patients with PID and nocardiosis, vast majority had CGD and pulmonary nocardiosis. The 12-month mortality was 10%.

