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**ePoster Viewing**

**Community-acquired respiratory infections**

**Clinical manifestations and pronostic factors of nocardiosis in Alicante, Spain, over a fifteen-year period**

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**Background:** Nocardial infections are unusual and difficult to diagnose. The purpose of this study was to describe the demographic, clinical and microbiological characteristics as well as prognostic factors of patients with infection by *Nocardia spp.* occurred in four public teaching hospitals belonging to the province of Alicante (Spain)

**Material/methods:** A multicenter, observational and retrospective chart review study was done in patients diagnosed of *Nocardia spp.* infection, including a period of fifteen years, according to the databases of Microbiology and Admission Services of Vega Baja hospital in Orihuela, University General hospital in Alicante, University San Juan hospital and Marina Baixa hospital in Villajoyosa that provide healthcare to approximately 863.280 inhabitants.

**Results:** From January 2000 through April 2015, 93 patients were diagnosed of nocardiosis, but only

87 charts had enough clinical information to be included for the analysis. The mean age was 67,8 (15,4) years (range 12-92), 61 (69,3%) were males, 83 (95,4%) had underlying diseases and the mean age-adjusted Comorbidity Charlson Index was 5,2 (3). The most frequent condition were respiratory disorders, 51 patients (58,6% ) had chronic obstructive pulmonary disease and 18 (20,7%) other pulmonary diseases. Twenty patients (21%) had solid tumors or hematologic malignancies. Thirty six (41,4%) patients received systemic corticosteroids and 11 (12,6%) biologic therapy. The median time up to the diagnosis was 20 days (IQR 12-30). Most patients presented with lung manifestations, 40,6% had pneumonia, 11(12,6%) developed cutaneous lesions, 3 (3,4%) had osteoarticular involvement and 3 (3,4%) were disseminated. Forty one percent patients had polymicrobial infections. *Nocardia* isolates were identified by standard procedures and 45 cases (51,7%) also by 16S rRNA gene polymerase chain reaction (PCR) and sequencing. *N. cyriacigeorgica* was the most common specie identified with 13 cases (15%) followed by *N. asteroides* in 8 (9%). Antimicrobial sensibility study was obtained in 55 isolates (63,2%), 8% presented resistance to cotrimoxazol and 3,4% to amikacin. Twenty one patients (24%) died, 11 (12,6%) of them were considered related to infection. Factors associated with infection-related mortality were Charlson score greater than 6 (OR 5,63; CI 95%: 1,48-21,48,  $p=0,006$ ), hematogenous spread (OR 10,5; CI 95%: 5,43-20,29,  $p < 0,001$ ) and chronic kidney disease (OR 4,92; CI 95%: 1,27-18,95,  $p=0,013$ ).

**Conclusions:** 1. Nocardiosis affects patients with high index of comorbidity. 2. Chronic lung diseases were the most common underlying condition. 3. New species of *Nocardia* were identified. 4 A significant proportion of *Nocardia spp* isolates were resistant to cotrimoxazole. 5. Polymicrobial infections were frequent in our study but were not associated to mortality. 6. Comorbidity, chronic renal disease and disseminated presentation increased related mortality to infection.