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ePoster Viewing

Clinical ID: community-acquired infections including CAP, sepsis, STD, ...

"Trends observed in Legionnaires' disease (LD) in a hospital of Catalonia (Spain) (1983-2014)"

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**Background:** Since its first description in 1976, *Legionella pneumophila* has been recognized as an important cause of community and hospital-acquired pneumonia in both healthy and immunosuppressed patients. We have systematically used urinary antigen testing as a specific diagnostic test for *Legionella* infection since 1994. It should also be pointed out that the reporting of Legionnaires' disease (LD) has been mandatory in Catalonia since 1987. Earlier diagnosis and changes in treatment of LD may have allowed the recognition of this infection in patients with different demographic characteristics and risk factors and may have influenced clinical appearance and outcome.

**Objectives:** To determine trends in demographic and clinical data, individual risk factors, diagnostic methods and outcome over time by comparing patients with community and hospital-acquired Legionellosis collected from 1983 to 2014.

**Patients and Methods:** Trends in case number, mean age, rate of males, smokers and alcoholics, individual risk factors, underlying diseases, extrapulmonary symptoms, diagnostic techniques, complications and outcome were calculated by multivariate linear regression analysis per year.

**Results:** We obtained data from 517 cases from 1983 to May 2014. 311 (58.2%) were community-acquired. The mean age was 60.68 years (range, 15 to 95), with males making up 74.8%. Four-hundred forty-four (84.9%) patients were smokers (244;46.9%), alcoholics (121;23.4%) and/or had underlying disease (351; 67.1%), with chronic lung disease being of note in 151 (29%) and 51 (11.3%) had aspiration risk factors. Extrapulmonary symptoms were found in 203 (40.4%), with complications on evolution in 244 (47.3%), 46 (9.1%) patients needed mechanical ventilation and the mortality rate was 11.8% (61/517). 205 (43.7%) received quinolones (mainly levofloxacin) and 257 (54.8%) macrolides (mainly erythromycin). The mean time to afebrile was 53.8 hours (being <72h in 82.6%). According to analytical data, 93 (19.5%) had hyponatremia, 64 (23.4%) showed elevated creatine kinase values and 185 (41.7%) had raised aspartate aminotransferase levels. Concerning radiological manifestations. Infiltrates were multilobar or bilateral in 117 (22.9%) patients. According to trends from 1983-2014, the mean age, the proportion of males, and the rate of extrapulmonary symptoms has increased over time, but only urinary antigen test-based diagnosis showed a significant increase ( $p<0.001$ ). The rate of underlying diseases, smokers, and mortality decreased over time, with only the number of culture-based diagnosis significantly decreasing ( $p=0.013$ ). The rate of complications has remained stable over time.

**Conclusions:** Since 1983, no major differences have been observed in demographic characteristics, risk factors and evolution of patients with Legionnaires' disease. However, the diagnosis of LD has increasingly simplified by the use of *Legionella* urinary antigen testing and there has been a dramatic decrease in culture-based diagnostic techniques thereby impairing epidemiological studies