

Reply to Head and Keynan

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To the Editor

We thank Dr. Keynan et al. (1) for their interest in and comments on our work. Dr. Keynan et al., make several noteworthy points. Although community-acquired pneumonia (CAP) is frequently described as the most prevalent pulmonary infection in HIV-infected patients following pneumocystis and tuberculosis, it is well known that the prevalence of these three pulmonary infections varies with geographic region (2). In Spain, the geographical area of our study, *Legionella pneumophila* is the third most frequent cause of CAP in HIV-infected patients requiring hospitalization after pneumococcal and viral pneumonia (3). We understand the point of view of Keynan et al. (1) that our results in non-advanced, virologically suppressed HIV-infected patients are similar to the results reported in the South Bronx *Legionella* outbreak (4). In line with our study, recent data from US surveillance and reporting systems indicate that the incidence of *Legionella* has increased, with the cities of New York, Maryland and Connecticut having the highest incidence in the US Northeast or Mid-Atlantic regions (5, 6). Of course, we cannot compare the incidence of *Legionella* with regions such as South Africa, where despite the high prevalence of HIV-infected adults, CAP caused by *Legionella* is uncommon (less than 2% of all adults with CAP) and undiagnosed mainly due to the high burden of tuberculosis and HIV co-infection (7) (approximately 50% of tuberculosis cases are HIV-infected) as concluded in the study by Wolter et al. (1).

We totally agree with the observation of Keynan et al. (1) that our results cannot be applied to advanced patients, because of more the 80% of our cases had >200 CD4 cell/mm³. In addition, more than half of our cases were virologically suppressed on antiretroviral therapy (ART), as is recognized among the limitations our study: “E

though we included consecutive cases, 54% had virological suppression, and because of the small number of cases included, our results cannot be extrapolated to non-suppressed HIV-infected patients”(8). We believe that these two issues as well as all our cases having received appropriate empiric antibiotic therapy provide clarification as to why our cohort of patients presented lower rates of admission to intensive care unit (ICU) and favorable outcomes.

In conclusion, as it may be difficult to identify *Legionella* infection in regions with higher burdens of HIV and tuberculosis, such as South Africa, clinicians must make an effort to diagnose *Legionella* despite the uncommon presentation, given the higher associated mortality especially due to inadequate antibiotic therapy. Finally, our results can be applied to regions such as Europe, Australia and North America where most HIV-infected patients have high CD4 cell counts and are virologically suppressed on ART.

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