# Institute of Tropical Medicine, Spain: multistem-infection Klebsiella pneumoniae multi-site recurrence

Authors: Chad Anderson Julia Flores Andrew Kemp Ana Thomas Billy Bennett

Published Date: 05-28-2019

University of Phoenix-Phoenix Campus

School of Economics

In light of available data and the onset of multi-site recurrence events in klebsiella pneumoniae, researchers in the Laboratory of Infectious Diseases of the Institute of Tropical Medicine and Control Plan for Klebsiella pneumoniae in Madrid and the European Center for Disease Prevention and Control (ECDC) recently carried out a study to clarify the epidemiological and mechanistic characteristics of a large outbreak by CTX-M-1-producing Klebsiella pneumoniae.

A total of 330 CTX-M-1-producing Klebsiella pneumoniae have been isolated in 57 hospitals in 20 states in 12 countries. The two most recent major outbreaks occurred in France (2010) and Greece (2010). In France, the last infections occurred in the general intensive care unit (IGU) and for the first time in a developed country. For comparison, there were 75 confirmed cases of Klebsiella pneumoniae in intensive care units at the clinics of London (2008) and 31 in intensive care units at Eli Lillyâ€™s facility in Wuppertal, Germany (2008).

According to the authors, the multipath bioassay process was successfully completed in December 2011, confirming the multi-site recurrence phenomenon. The report highlights the incidence of multi-site recurrence in this series (22% overall) in the general intensive care unit (IGU) and now in the intensive care unit (ICU) as previous cases with only secondary sites have been limited to the IBU and ICU, without the ICU having been considered at the outset. The report also highlights the increase in the occurrence of multistem-infection, in which klebsiella pneumoniae are the most frequent microbial agents.

The authors suspect that the Klebsiella pneumoniae multi-site recurrence phenomenon is related to the complex combination of environmental factors that is expected in these settings. It is notable that a subset of Klebsiella pneumoniae is different from the remaining klebsiella pneumoniae through a unique function/functional variations (HMs) mutation and its mechanism of resistance (CV/A).

In recent years, methicillin-resistant Klebsiella pneumoniae (MRK-K) has been identified in the hospital setting with increased frequency. Moreover, after klebsiella pneumoniae and Pseudomonas aeruginosa, MRK-K is the bacterium most commonly reported to have invasive pneumocystis pneumoniae (Pp) in the intensive care unit (ICU)

The authors propose that mechanism of resistance is transmitted to the eotemporal levels, but nevertheless, indicates a limited transmission pathway to which other organism of phylogenetic common descent can be brought. The report adds that further investigations are warranted to clarify how pathways of resistance such as emergent resistance from within system virus etymologies are developed.

Reference: L. P. Olivera, B. Luque, C. G. Fernandez-GÃ³mez, E.S. Celentano, C. Heguel-Mata, M. Ãlvarez-Torres, M. Fernando-Mello, V. P-R. Giorgis, J. A. Ignacio Ayestar-n, J. N. Conrada-n & E. L. Ebecilio (2011).Multi-site Klebsiella pneumoniae multi-site recurrence by CTX-M-1-producing Klebsiella pneumoniae. Antimicrobial Agents and Chemotherapy. 15, 62-73. doi:10.1016/j.amatech.2011.11.013

A Black And White Fire Hydrant In A Field