Abstract

Objectives. To evaluate the factors associated to mortality caused by bacteremia due to Escherichia coli and Klebsiella spp. producers of extended-spectrum beta-lactamase (ESBL). Materials and methods. We performed a retrospective cohort study, including 85 patients older than 16 and diagnosed with bacteremia by Escherichia coli or Klebsiella spp., hospitalized between 2006 and 2008 in Cayetano Heredia National Hospital. Cohorts were classified according to the ESBL production following blood culture results. Factors associated to gross and attributable mortality were evaluated using the Poisson regression in a multivariate model, through which adjusted relative risks (ARRs) were obtained. Mortality curves were also built. Results. 35.3% of bacteremia cases were caused by ESBL-producing strains. The analysis of gross mortality showed a higher mortality rate in the group with ESBL producing strains (63.3%), ARR being 1.5 (CI 95%: 1.02-2.3). In the case of the attributable mortality, the proportion was also higher (63.3%), ARR being 1.9 (CI 95%: 1.2-2.9). The use of a central venous catheter was another factor associated to both gross mortality (ARR= 2.4; CI 95%: 1.2-4.8) and attributable mortality (ARR= 3.8; CI 95%: 1.6-8.8). Conclusions. The production of ESBL is an independent risk factor for bacteremia mortality caused by E. coli and Klebsiella spp. Its presence should be evaluated following diagnosis consideration and initial therapy elaboration, which could in turn decrease the mortality by this cause.

Keywords

Beta-Lactams, Escherichia coli, Klebsiella, Mortality, Bacteremia (source: MeSH NLM).