KPC-PRODUCING *Klebsiella pneumoniae* CAUSING NOSOCOMIAL OUTBREAK IN A HOSPITAL OF MIDWEST REGION OF SÃO PAULO STATE – FIRST REPORT

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Background: Healthcare associated infections caused by multiresistant Gram-negative bacilli (GNB) are becoming worrisome in public health, due to novel mechanisms of resistance to antimicrobial agents, such as the production of carbapenemases, mainly KPC-producing *Klebsiella pneumoniae*. Characterization of nosocomial outbreaks caused by carbapenemases-producing GNB is useful to understand their causes and prevention. **Objectives:** The aim of this study is to describe the first report of a nosocomial outbreak caused by KPC-producing *K. pneumoniae* in a hospital of midwest region of São Paulo State. **Material and methods:** Between April to September 2015, 27 *K. pneumoniae* isolates resistant to carbapenems, obtained from surgery wound, catheter tip, urine and swab surveillance, from a hospital of Midwest region of São Paulo State were sent to Adolfo Lutz Institute, Marília City, SP, to confirm the identification and resistance to carbapenems by susceptibility tests (disk-diffusion, tests with beta-lactamases inhibitors and minimum inhibitory concentration – Etest) against various antimicrobial agents. *K. pneumoniae* isolates resistant to carbapenems were submitted to tests with enzymatic inhibitors recommended by NT 01/2013, ANVISA; isolates were sent to Adolfo Lutz Institute – São Paulo to confirm the presence of carbapenemase by PCR and performing epidemiological typing by PFGE (CHEFIII, BioRad). **Results:** The MIC_{50} and MIC_{90} (µg/mL) of the tested drugs were respectively: amikacin (8, 48), cefepime (64, >256), cefotaxime (> 256x256), ceftazidime (32> 256), ciprofloxacin (> 32,> 32), Ertapenem (> 32,> 32), gentamicin (0.5, 1), imipenem (> 32,> 32) meropenem (> 32,> 32), piperacillin / tazobactam (> 256/4,> 256/4), polymyxin B (12, 24), tigecycline (1, 2) and tobramycin (12, 32). All isolates were inhibited by phenyl boronic acid. Of the total of 27 isolates, 25 (92, 6%) were positive for bla_{KPC} gene and two (7.4%) were negative. The epidemiological typing by PFGE (XbaI) showed the presence of three clones, A (n = 13), B (n = 9), C (n = 4) and one isolate with a single profile. **Conclusion:** Thus, it is evident the presence of circulating multiresistant clones in this hospital, which complicates treatment options and emphasizes the importance of good hospital infection control practices. After the actions taken by the local and state surveillance the outbreak was controlled

Financial support: Adolfo Lutz Institute and FAPESP (Grant 2012/21709-5) to DG.

Key words: carbapenemase; nosocomial infection; *Klebsiella pneumoniae*; KPC; nosocomial outbreak.