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ePoster Viewing

Antimicrobials: epidemiology of MDR Gram-negatives

Co-production of 16S ribosomal RNA methyltransferase RmtB with KPC and CTX-M-14 in *Klebsiella pneumoniae* in Sao Paulo State, Brazil, from 2011 to 2014

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**Objectives:** The aim of this study was to investigate some 16S-RMTase and KPC and CTX-M co-production among aminoglycosides-resistant *Klebsiella pneumoniae* clinical strains belonging to a collection of the Instituto Adolfo Lutz (IAL) of São Paulo City and from a Hospital of São José do Rio Preto City, Brazil. IAL serves as a state reference laboratory and receives multidrug-resistant Gram-negative pathogens on an ongoing basis. **Methods:** During the period of 2011 and 2014, fifty isolates from São Paulo City belonging to a IAL's collection obtained from several hospitals of São Paulo State were selected among a total of 1750 KPC-producing *K. pneumoniae* and fifty isolates from a hospital in São José do Rio Preto City. Resistance profile was analysed and *Klebsiella pneumoniae* isolates with high-level aminoglycoside resistance (MIC  $\geq$  256 micrograms/mL) and ESBL and KPC producing were tested for the presence of *bla*<sub>ESBL</sub> and *rmt* genes. ERIC-PCR and MLST were carried-out to determine the genetic diversity. **Results:** PCR and DNA sequencing confirmed the presence of *bla*<sub>CTX-M-14</sub> and *rmtB* in 2 isolates from different hospitals in São Paulo City. Both were resistant to all beta-lactams, ciprofloxacin and presented high level resistance to amikacin, gentamicin and tobramycin ( $\geq$  256 micrograms/mL) and were sensitive to tigecycline; polymyxin B were not tested. ERIC-PCR profiles showed that both isolates were strictly related and belonged to ST258. **Conclusions:** To our knowledge this is the first report of the co-production of KPC and RmtB in *Klebsiella pneumoniae* in Brazil. Multidrug resistance is worrisome, the production of 16S rRNA methyltransferase limits the treatment of the infections caused by these microorganisms

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