

TITLE: CIRCULATION OF PERSISTENT AND NEW SEQUENCE TYPES IN CARBAPENEM-RESISTANT *Acinetobacter baumannii* CLINICAL ISOLATES IN PUBLIC HOSPITALS IN RIO DE JANEIRO.

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ABSTRACT:

Acinetobacter baumannii is an emerging opportunistic Gram-negative non-fermentative pathogen responsible for an increasing number of health care-associated infections (HCAIs) in institutions worldwide, especially in adult intensive care units (ICUs). These possess the ability for multidrug resistance. The aim of the study was investigate the genetic relationship of carbapenem-resistant *A. baumannii* clinical isolated from inpatients during nine months from two public hospitals in Rio de Janeiro, Brazil. Antimicrobial susceptibility profile was determined by disc diffusion method and minimal inhibitory concentration. Polymerase chain reaction was applied for carbapenemase genes. Isolates were subjected to pulsed field gel electrophoresis (PFGE) and multilocus sequence typing (MLST) for molecular typing. Most of the isolates showed high resistance rates to antibiotics tested. The *bla*_{OXA-51-like} gene and *bla*_{OXA-23-like} gene was found in all isolates. A total of 83 OXA-23-producing isolates were clustered into 13 genotypes by PFGE. Molecular analysis characterized by two schemes of MLST identified six reported sequence types (STs) and seven novel STs, respectively. The most prevalent PFGE profiles were designated as ST15 (CC15), ST188 (CC2), ST79 (CC79) and a new ST (MLST-IP) and ST225 (CC103), and three new STs (MLST-UO). This study showed the widespread of clonal complexes of *A. baumannii* harboring the *bla*_{OXA-23-like} gene in different public hospitals. Further monitoring and control measures for *A. baumannii* spreading are necessary.

Keywords: *Acinetobacter baumannii*; OXA-23, PFGE, MLST, Brazil.

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