TITLE: CHARACTERIZATION AND FACTORS ASSOCIATED WITH ISOLATED MULTI DRUG-RESISTANT MICRORGANISMS "COMMUNITY-ONSET" AMONG PATIENTS ADMITTED TO A HOSPITAL TERTIARY.

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ABSTRACT:

Multidrug-resistant microorganisms pose an imminent risk to hospitalized patients, however, there is the diffusion of these pathogens from the hospital (HA - *health associated*) to the community (CO - *community onset*). The term "ESKAPE" is used to name the main bacteria found in the health services with their initials: *Enterococcus spp.*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *Enterobacter spp.* The study aimed to analyze the associated factors of agents of the ESKAPE group, including: *Enteroccocus spp.* Resistant *S. aureus* (MRSA), *K. pneumoniae* and Carbapenem-resistant *Enterobacteriaceae* (CRE), *A. baumanii* (AbRI) and *P. aeruginosa* (PaRI) resistant to imepenem of community origin, besides characterizing the incidence profile of the same. The research involved four public hospitals in the municipality of Bauru, São Paulo, including positive clinical and surveillance samples from patients hospitalized from january to december 2014. The medical records were investigated through the electronic system E-Pront and for the a multivariate logistic regression model was used, including demographic, pathogenic and comorbid data, using criteria of $p < 0.05$ and $p < 0.1$, performed by SPSS 20 software (IBM, Armonk, NY). A total of 1004 samples from 636 patients were analyzed, in which 9% belonged to the "CO" group. In the "CO" group, MRSA (38%), AbRI (23%), CRE (20%), PaRI (12%) and VRE (3%) were identified, while in the "HA" group, the incidence was inversely MRSA (21%) and AbRI (42%) and equivalent for other agents, CRE (23%), PaRI (13%) and VRE (1%). In the statistical analysis, patients with MRSA (odds ratio = 2.51, 95% Confidence Interval [CI] = 1.61-3.94, $p < 0.001$) and renal disease (OR = 2.01, 95 % CI = 1.14-3.52, p = 0.02) are positively associated with belonging to the "CO" group, as opposed to having central nervous system disease (OR = 0.55, 95% CI = 0 , 33-0.91, p = 0.02) and trauma (OR = 0.25, 95% CI = 0.09-0.69, p = 0.008). Therefore, the non-association of people with trauma in the "CO" group, reveals that part of this group has previous contact with health services, omitted in the medical record, while the presence of MRSA indicates the association with healthy young individuals living in the community, differing from hospital infections, often caused by *A. baumannii*, which afflict severe and immunosuppressed patients.

Keywords: microrganism multidrug-resistant; eskape; community-onset; heatlhcare associated.