TITLE: OVERVIEW OF THE BACTERIAL RESISTANCE IN CATS AND DOGS IN THE METROPOLITAN REGION OF SÃO PAULO

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ABSTRACT:

Cats and dogs are becoming part of the Brazilian families. The relationship of affection established has increased the contact between animals and their owners, which has allowed to both of them to share spaces and utensils. Therefore, animals with multiresistant may be potential disseminators of agents or its resistance gene. The paper aims at reporting the bacterial resistance in isolated ones arising from different samples of domiciled cats and dogs and with access to the veterinarian health services, in addition to mapping such resistance in the city of São Paulo. The descriptive study has analyzed 2459 samples received from different localities of the city of São Paulo during the year 2015. The diffusion technique was performed pursuant to the CLSI rules (2015) and the markers were the detection of ESBL in enterobacteria, oxacillin resistance (1µg) and phenotype MLS_B^+ in the group of *Staphylococcus intermedius* (GSI), as well as the Imipenem resistance (10 µg) in the strains of *Pseudomonas aeruginosa.* All data collected were filed in Excel, spreadsheets and sent for geoprocessing. The data plotting in the maps was organized according to the veterinarian care services. Regarding the distribution of veterinarian services, the veterinarian clinics have the most percentage (79%), followed by the hospitals (13%) and specialized centers (8%). The study demonstrated that there is at least one resistance phenotype in all of them. The bacterial resistance is strongly distributed in basically two regions of the maps: central and east areas, which are places with large population clusters, but relevant data which could demonstrate interference of this factor in the distribution of bacterial resistance was not found. Strains of *E.coli* and *Klebsiella* sp, which produces 22% and 44% of ESBL, respectively, were identified in samples of urine, demonstrating the difficulty of treatment with β-lactams. Such resistance phenotype is present in a higher rate in veterinarian hospitals. Marker OXA R has appeared in a higher number of veterinarian clinics, being therefore a worrying factor, since this is the most widely distributed service in the city. In addition, specialized centers demonstrate a higher rate of registration of the phenotype OXA R associated to the phenotype MLS_B^+. Therefore, we may consider that this study may help the veterinarian medicine, contributing for the public health in order to alert and avoid the emergency of multiresistant strains in pets.

Keywords: bacterial resistance, antibiotic therapy, dogs and cats, veterinary medicine, bacterial multidrug resistance.