TITLE: MULTILOCUS VARIABLE-NUMBER TANDEM-REPEAT ANALYSIS AND RESISTANCE PROFILES OF *SALMONELLA* DUBLIN STRAINS ISOLATED IN BRAZIL.

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ABSTRACT:
Salmonella Dublin is a serovar strongly adapted to cattle that may cause enteritis and/or systemic disease with high rates of mortality in these animals. However, this serovar can be sporadically isolated from humans, usually causing a serious systemic infection especially in patients with underlying chronic diseases. The aims of this study were to molecularly type *S.* Dublin strains isolated from humans and animals in Brazil and access its antimicrobial resistance profiles. A total of 113 *S.* Dublin strains isolated in Brazil from humans (83) and animals (30) between 1983 and 2016 were studied. The genotypic diversity was accessed by Multilocus variable-number tanden-repeat analysis (MLVA) and the strains were tested against 16 antimicrobials. MLVA grouped the strains into two major groups. Group A clustered five strains isolated between 1983 and 1997, while group B presented 106 strains isolated in 1984 and 2016. Also, two strains isolated in 1991 and 1990 were allocated out of these two groups. Resistance to at least one of the 16 antimicrobials tested was found in 20.4% of the 113 *S.* Dublin strains studied. Among the 83 strains isolated from humans, 13.3% were resistant to tetracycline, 3.6% to nalidixic acid, 2.4% to streptomycin, 2.4% to tetracycline-ampicillin, 1.2% to ciprofloxacin, 1.2% to imipenem, 1.2% to nalidixic acid-ciprofloxacin, 1.2% to tetracycline-ampicillin-piperacillin, 1.2% nalidixic acid-tetracycline-ciprofloxacin and 1.2% to chloramphenicol-tetracycline-ampicillin-streptomycin. Among the 30 strains isolated from animals, 6.7% were resistant to nalidixic acid-ciprofloxacin, 6.7% to nalidixic acid-tetracycline and 3.3% to nalidixic acid. The results showed that the majority of the *S.* Dublin strains studied isolated in Brazil may descend from a common ancestor that has been contaminating both humans and animals in Brazil. The antimicrobial resistance results showed that the *S.* Dublin strains isolated from humans were resistant to more types of antimicrobials than the animal strains.

KEYWORDS: *Salmonella* Dublin, Molecular typing, MLVA, Resistance.

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