TITLE: ANTIMICROBIAL RESISTANCE PROFILE IN BACTERIA ISOLATED FROM FREE-RANGE CHICKEN EGGS (*GALLUS GALLUS DOMESTICUS*) MARKETED IN FREE FAIRS IN SEMIARID OF NORTHEASTERN BRAZIL

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ABSTRACT:
Antimicrobial resistance is considered a global health concern that compromises the effectiveness of antibiotics, rendering the treatment of common infections unfeasible, and which is intrinsically associated with the indiscriminate use of antimicrobial agents. The existence of antibiotics in animal feed generates a risk factor not only for the animals themselves, but for human health and in this way the possible presence of residues in meat, eggs or milk is questioned, which in human food may be the additives themselves or their accumulated metabolites in the products. The objective of this survey was to evaluate the in vitro antimicrobial resistance of 22 isolates of enterobacteria from free-range chicken eggs traded in free trade fairs in the semiarid of Northeastern Brazil. The in vitro susceptibility test by the disk diffusion technique was used to verify the resistance profile using 19 antimicrobials of five classes: aminoglycosides: amikacin (30µg), gentamicin (10µg) and neomycin (30µg); β-lactams; cephalexin (30µg), ceftazidime (30µg), cephalothin (30µg) and amoxicillin + clavulanic acid (30µg); quinolones: pipemidic acid (20µg), nalidixic acid (30µg), enrofloxacin (5µg) and norfloxacin (10µg); carbapenems: ertapinem (10µg), imipinema (10µg) and meropenem (10µg); others: chloramphenicol (30µg), tetracycline (30µg) and polymyxin B 300 U.I. Two isolates (9.1%) were *Escherichia coli*, three (13.6%) *Klebsiella* spp., four (18.2%) *Pseudomonas aeruginosa*, one (4.5%) *Enterobacter* spp., three 6%) *Salmonella* spp., three (13.6%) *Proteus mirabilis*, three (13.6%) *Citrobacter* spp., two (9.1%) *Providencia* spp. and one (4.5%) *Alcaligens* spp. Seventeen (77.3%) isolates showed multiple resistance to more than one class of antimicrobials. The highest resistance rates were for ampicillin (63.6%), amoxicillin + clavulanic acid (63.6%), cephalothin (54.5%) and cephalexin (54.5%). It is concluded that there is a wide variety of enterobacteria with multiresistant profile present in free-range chicken eggs, which is important from the public health point of view, since this condition may make it difficult to choose antimicrobials for the treatment of infections, as well as the agents can be transmitted to humans through contact with food.

Keywords: eggs, free-range chickens, multiresistant profile, public health

Development Agency: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)