TITLE: NON-SUSCEPTIBILITY TRENDS AMONG *Enterobacteriaceae* FROM URINARY TRACT INFECTIONS IN OUTPATIENT CLINIC OF A HOSPITAL IN RIBEIRÃO PRETO, IN 2014.

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ABSTRACT

The *Enterobacteriaceae* family is the main cause of bacterial infections in various anatomical sites, especially in the urinary tract. Antimicrobial treatment of urinary tract infections (UTIs) should be done rationally, basing on antimicrobial susceptibility testing, because the equivocal use of these drugs can select resistant enterobacterias and, consequently, affect the efficiency of antimicrobial therapy. The study aimed to investigate the level of resistance (including intermediate resistance) among *Enterobacteriaceae* isolated from urine, at the Clinical Laboratory of the Pharmaceutical Sciences Course in University of Ribeirão Preto (LAC-CCF UNAERP), during the year 2014. For the evaluation of resistance profile, a descriptive survey was realized by data collecting from all 517 tests antibiograms, carried out during the year 2014, from positive urine cultures for enterobacterias. The antimicrobials classes investigated were: β-lactams, aminoglycosides, fluoroquinolones, nitrofurans, tetracyclines and sulfonamides. Of the 517 exams analyzed, 461 (89.1%) presented isolates resistant to at least one of the antibiotics used in the antibiogram. The enterobacterias more identified in evaluated exams were *E. coli* in 393 exams, and *Klebsiella* spp in 77 exams (68 *Klebsiella pneumoniae* and 9 *Klebsiella oxytoca*). Among the *E. coli* isolates, the highest rate of resistance was against penicillins (70%), followed by cephalosporins (60%), tetracyclines (37%), sulfonamides (33%) and fluoroquinolones (28%). The lowest rate of resistance was against carbapenems (0,5%) and nitrofurans (2%). In comparison, *Klebsiella* spp isolates showed higher resistance rates to (30% cephalosporins, 25% tetracyclines, 18% fluoroquinolones and 18% nitrofurans), except carbapenems (4%). During the year 2014, the resistance profile to cephalosporins and fluoroquinolones, among *E. coli* isolates, demonstrated significant increase in the second semester, in comparison with the first one. The cephalothin was the antimicrobial that presented the highest increase of resistance in this period. When evaluating the prevalence of non-suscetibility among all *Enterobacteriaceae* species, the highest resistance which was evidenced, was against β-lactams, moreover, the specie that showed the highest resistance rates was *E. coli*.

Keywords: Enterobacterias, Urinary Tract Infection, Bacterial resistance