

ABSTRACT

MSc Thesis

DETERMINATION OF ANTIMICROBIAL SUSCEPTIBILITY OF ENTEROCOCCI ISOLATED FROM VARIOUS ENVIRONMENTAL SOURCES BY DISC DIFFUSION METHOD

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Enterococci are present normally in the intestinal flora of human and the animals. Large amounts of Enterococci are found in stool which makes easy their spread in the nature and environment. Enterococci can survive and easily adapt themselves to extreme conditions. They resist temperature changes, and different acidity, osmolarity, NaCl, H₂O₂ conditions.

The aim of the present study is to determine the antimicrobial resistance of the enterococci isolated from ground, water and waste.

In addition to intrinsic resistance to beta lactams and aminoglycosides, acquisition of resistance to streptogramins, macrolides and vancomycin, limited the therapeutic options for he infections due to enterococci. Because of the fact that they have instrinsic and acquired resistance to many antimicrobial agents which is one of the most freuquent isolated microorganisms from hospital infection in recently.

In our study, we have isolated 50 enterococci from various environmental sources and determined that 38 of this isolates is *Enterococcus faecium* (76%), 7 of it is *Enterococcus gallinarum* (14%), 2 of it is *Enterococcus faecalis* (4%), 2 of it is *Enterococcus durans* (4%), 1 of it is *Enterococcus avium* (2%). And also, it is found that 17 (34%) of 50 enterocci isolates, is resistable to erythromycin, 39 (78%) of it to clindamycin, 39 (78%) of it to pirlimycin, 11 (22%) of it to ampicillin, 15 (30%) of it to penicillin, 5 (10%) of it to doxycyclin, 4 (%8) of it to vancomycin, 10 (%20) of it to tetracyclin, 29 (%58) of it to rifampicin, and 6 (%12) of it to norfloksacin. There was no resistance to teicoplanin, chloromphenicol and gentamycin in our isolates.

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Key Words:

Enterococcus faecium, environment, water, disc diffusion, antibiotic resistant, Gots' Test