8. İNGİLİZCE ÖZET (SUMMARY)

Investigation of Macrolide- Lincosamide- Streptogramin B resistance in clinical staphylococ isolates by phenotypical and genotypical methods

Purpose: The purpose of the present study was to determine the type and the responbible genes for the MLS_B resistance in Staphylococci isolated from clinical samples.

Methods: The isolates were identified to the species level using microbiological methods and 16S rRNA sequencing. Resistance rates for erythromycin, clindamycin, vancomycin, linezolid, gentamycin, levofloxacin, fusidic acid were determined with MIC agar dilution method. MLS_B resistance phenotypes were investigated by the D test. PCR was used to detect the presence of *ermA, ermB, ermC* and *msrA* genes in erythromycin resistant isolates.

Results: The study included 82 staphylococcal clinical isolates consisting of 54 *S. aureus* (28 MRSA and 26 MSSA) and 28 coagulase negative staphylococci. (14 MRCoNS and 14 MSCoNS) Resistance rates were as follows; clindamycin 35.4%, gentamycin 45.1%, fusidic acid 20.7% and levofloksasin 53.7%. The most frequently detected resistance phenotype among the total staphylococcal isolates was the constitutive type. Of 82 isolates, 54.9% were resistant to erythromycin; 30.5% (25 strains) of the isolates exhibited a constitutive phenotype ($cMLS_B$) whereas 18.3% (15 strains) expressed an inducible resistance phenotype ($iMLS_B$). Five strains showed MS_B phenotype. All of the five isolates with MS_B phenotype harboured *msrA* gene. The prevalence of resistance genes were as follows; *erm*A 32.9%, *ermB* 1.2%, *ermC* 7.3% and *msrA* 6.1%. Gene combinations of *ermA*-*ermC* was 4.9% and *ermA*-*msrA* was 1.2%. In one strain resistance mechanism could not determined.

Conclusion: Inducible MLS_B resistance which can not be determined with routine susceptibility tests can be determined easily by the D test. As a result the use of clindamycin which is a good option for staphylococcal infections can be decided more accurately. For detection of resistance genes a PCR method that provides rapid results can be also used.

Key words: Staphylococci, MLS_B resistance, D test, *ermA, ermB, ermC, msrA*.

Communication address: Dr. Güliz Uyar Güleç

Adnan Menderes University Faculty of Medicine Department of Infectious Diseases and Clinical Microbiology. Aydın/ Turkey

gulizuyar@yahoo.com