

## Survey of outbreak of bla oxa-51 like gene in Carbapenemase-producing Acinetobacter baumannii isolates from Blood cultures in Tehran, Iran using PFGE method

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### Abstract

**Objectives:** This study was conducted to investigate resistant gene profiles and epidemiology of carbapenem-resistant A.baumannii isolates.

**Methods:** We collected blood samples from bacteremic ICU hospitalized patients. Routine blood culturing and antibiogram testing with E-test method were performed. Along with determination of resistant phenotypes, antibiotic resistant genes detected with PCR and typing with PFGE method.

**Results:** From April 2016 to March 2019, 163 A.baumannii were isolated from all specimens of hospitalized patients in ICU, but 38 isolates that were from positive blood culture were included in this study. In antibiogram testing, 37 isolates showed resistance to imipenem or meropenem. One isolate that was susceptible to both of them, not included in this study. Minimum inhibitory concentration 50 (MIC) of imipenem was  $\geq 24$   $\mu\text{g/ml}$  and MIC 50 meropenem  $\geq 24$   $\mu\text{g/ml}$  and MIC 50 of colistin  $\geq 0.3$   $\mu\text{g/ml}$ . All the A.baumannii showed resistant gene of oxalo-carbapenemase; 37(100%) for OXA-51, but 24(64.86%) for OXA-24, for OXA-23, 31(83.78%) and for OXA-58, 9(24.32%). For genes of metallo- $\beta$ -lactamase, none of them (0%) had GIM and VIM, but 4 (10.81%) had SPM and 14(37.83%) had SIM.



### Biography:

Zahra Tayebi belongs to the department of microbiology in Islamic Azad University, Iran. She has done research on Genotype distribution of methicillin-susceptible Staphylococcus aureus clinical isolates in Iran, Characteristics of community-acquired methicillin-resistant Staphylococcus aureus associated with wound infections in Tehran, Genetic analysis of toxic shock syndrome toxin (TST) positive Staphylococcus aureus strains isolated from wound infections in Tehran hospitals

### Speaker Publications:

1. "Genotype distribution of methicillin-susceptible Staphylococcus aureus clinical isolates in Iran: high multiresistant clonal complex 8"
2. "Characteristics of community-acquired methicillin-resistant Staphylococcus aureus associated with wound infections in Tehran, Iran: High prevalence of PVL+ t008 and the emergence of new spa types t657, t5348, and t437 in Iran"
3. "Genetic analysis of toxic shock syndrome toxin (TST) positive Staphylococcus aureus strains isolated from wound infections in Tehran hospitals, Iran"

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