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**Title:** The prevalence of metalo-betalactamase producing Pseudomonas aeruginosa strains isolated from hospitalized patients by E.test method

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**Abstract:** Introduction and aim: During recent years metalo-betalactamase (MBLs) producing Pseudomonas aeruginosa have been reported to be important cause of nosocomial infection and has became a growing therapeutic concern worldwide. The aim of this study was to determine the prevalence of MBL producer P.aeruginosa strains in hospitalized patients.

Methods: A total 100 P.aeruginosa isolates were collected from various specimens of in-patients in 3 university hospitals of Yazd Shahid Sadoughi University during April 2008 until April 2010. All isolates were identified by conventional methods. The antimicrobial susceptibility test was performed by the Kirby-Bauer disc diffusion method according to CLSI protocols. Non-susceptible P.aeruginosa strains to carbapenems were screened for MBL production by E.test. Imipenem/imipenem + EDTA ≥8 µm confirmed MBL production.

Results: Out of the 100 P.aeruginosa isolates, 62% were resistant to imipenem, 3% were intermediately resistant and 35% were susceptible to imipenem. Among 65 imipenem non-susceptible P.aeruginosa strains, 50 (76.9%) were found to be metalo-betalactamase producers using MBL E.test (50% of all isolates were MBLs producers). Of the 50 MBL producers 34 % were isolated from urine and 26% from burn wound; also 34% belonged to ICU wards. All MBL producing isolates were multi drug resistant. The resistance pattern of isolated MBL (+) P.aeruginosa strains were as follows: 96% were resistant to SXT, 94% to ceftazidim, 88% to cefepim, 84% to cefotaxim, 74% to ceftriaxone and 66% gentamycin and ciprofloxacin.

Conclusion: Our findings shows the high frequency of MBLs producing P.aeruginosa so screening of imipenem non-susceptible P.aeruginosa isolates for MBLs production is necessary to prevent further spread of infection by P.aeruginosa.

**Key words:** Metalo-betalactamase, P.aeruginosa, E.test

**Presentation:** Poster