

Identification of Imipenem Resistant *Klebsiella pneumoniae* Isolates Due to Production of Metallo- Beta- Lactamases by DDST Methods

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Background & Objectives: *Klebsiella pneumoniae* is one of the important causes of nosocomial infections particularly in patient with co morbidities and immunodeficiency condition. Several antibiotics have use for its treatment. Metallo-beta- Lactamases have a board spectrum .They hydrolyze all Betalactams. Five groups of MBLs have been described up to now, namely, IMP, VIM,SPM,GSM and GIM . The purpose of this study was identification of Metallo beta-lactamases by DDST Methods.

Methods: This research was performed on 100 *Klebsiella pneumoniae* isolates that were collected from patients referred, to the hospitals of Hamadan University of Medical Siences in 2008-2010 ,the strains were distinguished with the antimicrobial susceptibility test, with Kirby Bauer and Etest methods and identification Metallo Beta- Lactamases was performed with DDST methods.

Results: According to the results, Imipenem resistant isolates were (12%) and (8%) Were Meropenem resistant isolates. Furthermore E-Test showed that these isolates were Imipenem resistance. evaluation of DDST methods showed that (5%) of these strains have Metallo-Beta-Lactamases enzyme.

Conclusion: The results of E-Test and disk diffusion methods indicate that increasing of resistance these bacteria is conceren of Metallo Beta-Lactamases for treatment and prevention of resistant isolates must be use from antibiotic correctly.

Keywords: *Klebsiella pneumoniae*; MBLs; DDST; Imipenem