Indian Journal of Basic and Applied Medical Research; March 2016: Vol.-5, Issue- 2, P. 861-866

**Original article:**

**Metallo beta-lactamases mediated resistance in Pseudomonas aeruginosa from clinical samples in a teaching hospital of North India.**

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**Abstract:**

Introduction: Metallo beta-lactamases(MBL)are class B type of beta-lactamases and are encoded by genes like VIM,IMP etc.They are enzymes requiring bivalent metal ions, usually zinc, as metal co-factors for their enzymatic activity.MBL production is significant problem in hospital isolates of Pseudomonas aeruginosa.Hence the present study was conducted at our hospital to know the prevalence of MBL amongst Pseudomonas aeruginosa.

Materials and Methods: The study was conducted at our hospital from January 2014 to July 2015.Total of 322 strains of Pseudomonas aeruginosa isolated from various clinical samples like pus,urine,sputum,ET secretions were evaluated for MBL production by Imipenem-EDTA Double Disk synergy test.

Result: Out of 322 Isolates of Pseudomonas aeruginosa 57( 17.70%) were MBL producers. All MBL producing isolates showed widespread resistance to different classes of antibiotics.

Conclusion: Hence the study underlines the fact that early detection of MBL producing P. aeruginosa may help in formulating an effective antibiotic strategy and prevent dissemination of these multidrug resistant strains.

**Key words:** Metallo-betalactamases, Pseudomonas aeruginosa, Imipenem, Double Disk Synergy test.