

Investigation of Carbapenem-Resistant Genes in *Acinetobacter* spp. Isolated from Patients at Tertiary Health Care Center, Northeastern Thailand

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Abstract : *Acinetobacter* spp. is a gram negative bacterium causing the high incidence of multi-drug resistance in patients admitted to an intensive care unit. A hundred isolates of Imipenem-resistant *Acinetobacter* spp. isolated from patients admitted at tertiary health care center, Northeastern region, Ubon Ratchathani, Thailand, were subjected to modified Hodge test and combined disc test in order to evaluate the production of carbapenemases. The results revealed that about 35% of isolates were found to be carbapenemases producers. In addition, multiplex polymerase chain reactions were performed to detect blaOXA-like genes. It showed that 92% of isolates possess blaOXA-51-like and blaOXA-23-like genes. However, blaOXA-58-like gene was detected in only 8 isolates. No detection of blaOXA-24-like gene was observed in all isolates. In conclusion, an ability to produce carbapenemases would be an important mechanism of multi-drug resistance among clinical isolates of *Acinetobacter* spp. at tertiary health care center, Northeastern region, Ubon Ratchathani, Thailand. Furthermore, it was likely that the class D carbapenemases genes, blaOXA-51-like and blaOXA-23-like, might contribute to imipenem-resistance exhibiting among isolates.

Keywords : *Acinetobacter* spp., blaOXA-like genes, carbapenemases, tertiary health care center

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