

**Occurrence of *Klebsiella pneumoniae* carbapenemase KPC gene in *Klebsiella pneumoniae* isolate from patients I Anbar city**

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***Abstract :***

Carbapenems are the last drugs of choice except colistin against serious infections caused by Gram-negative bacteria. However, there are increasing number of reports indicating prevailing emergence of KPC-producing clinical isolates worldwide, which is of harmful genes because many plasmids that carry KPC resistance elements concurrently carry other plasmid-mediated resistance elements, such as quinolone (QnrA and QnrB) and aminoglycoside (rmtB) resistance. This study reports KPC for the first time among *Klebsiella pneumoniae* from hospitalized patients in Anbar, Iraq. Six clinical isolates of *K. pneumoniae* resistant to carbapenem from 50 isolates were investigated from burned wounds, sputum, C.S.F, and blood samples. The susceptibility to different antibiotics was tested by VITEK-2 system. Where the percentage of resistance to Carbapenem was 22%. The phenotypic detection of carbapenemases by Modified Carba NP, Blue-CARBA Test that all isolates are carbapenem gene-producing, 5/6 (83.33%) gave positive result with the imipenem-EDTA test, and modified Hodg test. The bla<sub>KPC</sub> and other genes were detected by multiplex PCR and the result showed 1/6 (16.67%) strains positive for bla<sub>KPC</sub> gene and 5/6 (83.33%) strains harbored bla<sub>VIM</sub> and bla<sub>OXA-48</sub> genes. Our results showed the coexistence of both bla<sub>VIM</sub> and bla<sub>OXA-48</sub> genes in four strains of *K. pneumoniae*, while indicated widespread KPC, VIM, and OXA-48 in Anbar, Iraq. Hence, it is necessary to follow proper infection control practices and physicians should be aware of the patients with such risk factors.

**Key words :** *K. pneumoniae*, bla<sub>KPC</sub>, carbapenem-resistance, and bla – vim.

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