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Prevelance and antibiotic susceptibility patterns of *Pantoea* spp. isolated form clinical and environmental sources in Iraq

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Abstract : During the period from December 2014 to July 2015 , 40 isolates of *pantoea* spp. were isolated from 525 clinical and environmental sample from AL-Hakeem Hospital and AL-Sadder Medical City in AL-Najaf province. A total of 375 clinical samples from various sources included: Fistula-hemodialysis patients (n = 100), Stool (50), Urine (50), Ear-infection (25), Burn (100),Wound (50),While 150 hospital environmental specimen included system(50), bed (50) , earth (50). Then according to carbohydrate fermentation the 40 clinical and environmental isolates of *Pantoea* were distributed as follow *Pantoea agglomerans* 24 (60 %), 9(22.5 %) *Pantoea ananatis*, while 7 (17.5%) *Pantoea calida.*

The antibiotic resistance of *pantoea spp*. bacteria has profound clinical implications. Hence, this research was aim for the first time in Iraq to isolation and study prevelance of *pantoea spp*. From clinical and hospital environmental sources then determines their antimicrobial susceptibility patterns, the results revealed that *pantoea spp.* isolates associated with infection like hemodialysis inflammation (5), chronic diarrhea(5), UTI(3), otitis media (2), burn (10), wound (2), Also identified from 11 hospital environmental specimen included system (3) , bed (2), earth (6). At the same time the results found that *Pantoea spp*. were greatly resistant to antibiotics that most commonly used, so regard as multi-drug resistant(MDR), isolates exhibited high resistance to Amoxicillin and Gentamicin. While other antibiotics exhibited different activity against isolates. Furthermore, most isolates appeared low resistance to Meropenem and Amikacin while the isolates were sensitive to Imepinem which was the more effective on All isolates and the susceptible reached to (95%).

Conclusion The increase number of *Pantoea* species isolated from humans indicates that *Pantoea* is an opportunistic pathogen and consider as one of nosocomial infection in Iraq and These organisms are found to be resistance to the routinely used antibiotics. Appropriate antimicrobial drugs should be prescribed after detected antibiogram. The patients should also be prevent stop taking the drugs in the middle. This will help in minimising the complications, and help in preventing the emergence of resistant strains.

Key word : *Pantoea spp* , identification, clinical infection, antibiotic sensitivity.

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