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Does isolation site of Enterobacteriaceae affect susceptibility against Imipenem?

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Abstract

Objective: To determine the susceptibility pattern of Enterobacteriaceae isolated from different body sites against Imipenem

Methodology: We conducted a retrospective analysis of the susceptibility pattern of Enterobacteracaea against Imipenem, isolated from clinical specimens between April 2014 to July 2017 at Rawal General and Dental hospital, Islamabad, Pakistan.

Results: A total of 575 Enterobacteriaceae were isolated from urine, pus and other specimens. These specimens were taken from 163 males and 412 females. The ages of patients ranged from 1 to 80 years. Escherichia coli was among the most common isolate from all the specimens (n=359), followed by Klebsiella pneumoniae (n=92) and Enterobacter cloacae (n=51). Among the total isolates (n=575), 90.78 (n=522) were susceptible to Imipenem. Isolates from urine revealed 95.52% susceptibility against Imipenem which was significantly higher than the pus (74.22%) and other specimens isolates (83.01%) susceptibility against Imipenem ($p<0.0001$).

Conclusion: The site of isolation appears to have a significant effect on the susceptibility of bacteria to Imipenem. This factor should be taken into account when considering antibiotic resistance. Overall Imipenem resistance (Carbapenemase Resistance Enterobacteriaceae) was less than 10% among Enterobacteriaceae in our set up. This resistance was lowest among Enterobacteriaceae if isolated from urine (less than 5%).

Biography:

Naila Rafique belongs to the Rawal Institute of Health Sciences, Pakistan. Specialized in microbiological sciences.

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