Resistance patterns of bacterial isolates to antimicrobials in the United Arab Emirates

To the Editor

Increased resistance to Gram-negative organisms to several antimicrobials in 3 hospitals in the United Arab Emirates[1] was evaluated in relation to individual antibiotic. Prospective surveillance should incorporate a watch for concurrent resistance to several categories of antimicrobial agents. Emergence of multidrug resistant (MDR) isolates those were resistant to different types of broad spectrum antibiotics but susceptible to not that outstanding ones would necessitate corrected antimicrobial recipes. Isolates resistant to carbapenems, fourth generation cephalosporin, β–lactam-β-lactamase inhibitor, and aminoglycosides have been apparent in a private, tertiary care, multi-disciplinary hospital in Delhi. From 2007 onwards, there have been gram-negative isolates from patients' hospitalized with grave infections that were resistant to meropenem, piperacillin-tazobactam, cefepime and amikacin. In all pathological specimens, standard culture and susceptibility testing was carried out using the standards of the Clinical and Laboratories Standard Institute.[2] During 2007, of the 453 isolates, one Klebsiella species from purulent material and one Proteus species from urine were MDR. The Klebsiella was susceptible only to netilmicin and ciprofloxacin, while the Proteus was susceptible to nitrofurantoin and teicoplanin. During 2008, among 847 isolates MDR included Klebsiella 6, 3 each from urine and pulmonary tissues. Four were susceptible to teicoplanin and one each to aztreonam, linezolid and netilmicin. Both the Pseudomonas from urine were susceptible to nitrofurantoin, but one in addition was also susceptible to ampicillin-sulbactam and gentamicin. During the period January to June 2009 in 534 isolates, MDR included Klebsiella 6, from pulmonary tissues 5, one from urine, and one Proteus from urine. Four of the 6 Klebsiella were susceptible to ofloxacin and one each to ciprofloxacin, gentamicin, and rifampin while urinary isolate was susceptible to nitrofurantoin. The solitary Proteus from urine was susceptible to ofloxacin and nitrofurantoin.[3] Last but not least, there should be no hitch for a search for MDR even from the retrospective data from the United Arab Emirates.[1] There might have been an intriguing relationship between escalation of resistance to several antibiotics individually and concurrent occurrence of MRD in a hospital.

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Reply from the Author

In reply to Dr. Subhash's comments the following will answer his query.

The study was about the patterns of resistance in bacterial isolates from 1994-1995 until 2005. I do not think we had any problem with identifying MDR, but the difficult part was that the results were computerized after the year 2000 and before we had to go through patients' records to identify the patterns of resistance of the isolates to the different antibiotics. This took a lot our time and effort.

Al-Ain showed more resistance organism because of increased usage of more powerful and costly anibiotics like ciprofloxacin compared to Dubai and Al Tawam Hospital. Whether the Al Ain Hospital carried more MDR isolates could be true. Again the patterns of resistance could be different in Delhi Hospitals.

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