Antimicrobial dosing in critically ill patients with sepsis-induced acute kidney injury

Sir,

We read with interest the article by Anish Kumar *et al*.[1] It is an extremely important issue in critical care settings considering the incidence and high mortality rates associated with sepsis and the subsequent development of acute kidney injury (AKI). The antibiotics are one of the most important armamentarium in dealing with this problem. If we do not get the right dose at right time then it not only increases mortality, but also leads to subsequent development of infection with resistant organisms. The article adds to our improved understanding of the usage of antibiotics in septic AKI patients. The article has very well elaborated the factors that can affect the dosing of the antibiotics and how to give the appropriate dosage for most of the commonly used antibiotics.

There has been a significant epidemiological shift in the resistance patterns in intensive care unit (ICU) worldwide. Multidrug-resistant *Pseudomonas* and *Acinetobacter* have been the prototypical nosocomial pathogens for the past few decades. These organisms may be eclipsed by a rapidly growing global epidemic of cephalosporin and carbapenem-resistant *Enterobacteriaceae*. These organisms have been detected in India since 2006.[2] They continue to be a major source of nosocomial infections especially in Indian ICUs.

The use of colistin and tigecycline to deal with the changed epidemiology has increased in ICUs.[3] These drugs have their own unique pharmacokinetic and pharmacodynamic profile. This review does not highlight about the factors that may affect the pharmacokinetic s and dynamics of these drugs in AKI. The dosing regimen of colistin may also vary with different modalities of renal replacement therapy, and needs to be discussed as recommended by different authors.[4,5] The renal toxicity of colistin is said to be overestimated in past studies. We need new studies to look for dosing of colistin especially in septic AKI patients and reviews must address this issue.

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