CRITICAL CARE

LETTER

Colistin dosing for treatment of multidrug-resistant *Pseudomonas* in critically ill patients - please, be adequate!

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See related research by Rocco *et al.*, http://ccforum.com/content/17/4/R174, and related letter by Rashid *et al.*, http://ccforum.com/content/18/1/401

We read with great interest the article by Rocco and colleagues [1] that retrospectively evaluated risk factors for acute kidney injury in critically ill patients receiving colistin and the subsequent comments by Rachid and colleagues [2]. Although of considerable interest, we would like to challenge the paper by Rocco and colleagues regarding the administered colistin loading and maintenance doses, in particular during continuous renal replacement therapy. We agree with Rachid and colleagues [2] that recent pharmacokinetic data suggest the administration of higher and thus potentially more nephrotoxic, colistin doses for treatment of multidrug-resistant *Pseudomonas* species. In fact, the recommended loading and maintenance doses to adequately treat severe multidrug-resistant *Pseudomonas* infections should be, respectively, 9 million IU and 4.5 million IU twice a day [3], which is substantially higher than the doses used by Rocco and colleagues. From our experience, patients initiated on continuous veno-venous hemofiltration (CVVH) can receive even higher doses of colistin (a loading dose of 9 million IU, followed by a maintenance dose of up to 4.5 million IU three times a day) [4]. Treatment can be continued for a prolonged time period without increasing toxicity. As in patients without acute kidney injury, up to 80% of the filtered colistin dose undergoes tubular reabsorption [3-5]. Moreover, CVVH counteracts colistin accumulation because the drug is continuously filtered and significantly adsorbed in the bulk of the dialysis membrane [5]. Implementing such 'CVVH rescue' therapy does require the strict use of highly adsorptive CVVH membranes that enhance colistin adsorption in association with citrate anticoagulation to increase membrane performance [4,5].

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Abbreviations
CVVH: continuous veno-venous hemofiltration.

Competing interests
The authors declare that they have no competing interests.

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