

**B**eginning with this month, we aim to highlight the articles published in each issue of *Critical Care and Resuscitation*. The idea behind this approach is to explain why these articles have been chosen, why they are topical and why they should matter to the readership and field, and also to direct the readers to the topics they might wish to focus their attention on and to provide a context for their findings.

First, we have a cluster of articles (one editorial and two original papers) on high dose vitamin C.<sup>1-3</sup> As many readers would know, there is huge international interest in high dose (6 g/day) vitamin C for sepsis and septic shock. These articles summarise its rationale, the stability of the drug for infusion and the research agenda. As a multicentre phase 2 randomised controlled trial is now under way in Australia and New Zealand, this is highly topical for our readership.

Next, we report the statistical analysis plan for the most ambitious cluster crossover randomised controlled trial ever attempted in intensive care units (ICUs): the Proton Pump Inhibitors versus Histamine-2 Receptor Blockers for Ulcer Prophylaxis Therapy in the Intensive Care Unit (PEPTIC) trial.<sup>4</sup> As the completion of PEPTIC approaches, and since it involved the largest cohort of ICU patients so far in a single trial, this is a must-read article.

Fluid therapy remains topical and a major component of ICU treatment. In two articles by Parke,<sup>5,6</sup> a trial in cardiac surgery is presented together with evidence of the impact of fluid therapy on the biology of angiotensin-2 and the duration of mechanical

ventilation. In this cardiac surgery population, magnesium is often given to prevent or treat arrhythmias, but it is most commonly given as a bolus. However, Osawa et al<sup>7</sup> challenge this approach and demonstrate that a continuous infusion is a better option from a pharmacokinetic point of view.

Darvall and colleagues<sup>8</sup> address another common intervention in ICU patients: repositioning to avoid pressure injuries. This article is essential reading and its implications are clear: turn the patient! Zakhari and colleagues<sup>9</sup> deal with another very topical area of ICU practice: extracorporeal cardiopulmonary resuscitation; and they provide useful information on prognostication in such patients. Van Haren and colleagues<sup>10</sup> investigate the role of chlorhexidine washing as a way of preventing bloodstream infection and colonisation in the ICU. Their findings are hot on the heels of another article published in the previous issue of *CCR*<sup>11</sup> and provide fuel to the controversy.

Finally, Cutuli et al<sup>12</sup> investigate the way in which we measure and target temperature control in Australia and New Zealand. They show how body temperature remains the Cinderella of vital signs with the lack of protocols, variable and unpredictable targets, and the use of low quality measurement technology.

We hope you enjoy this issue and that this summary helps you understand the importance and impact of the research agenda in intensive care medicine.

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